



VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

4949-A Cox Road, Glen Allen, Virginia 23060

(804) 527-5020 FAX (804) 698-4178

www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

James J. Golden
Regional Director

June 17, 2021

Mr. Robert Dewechter
Asset Manager
Doswell Limited Partnership
Doswell Energy Center
10098 Old Ridge Road
Ashland, VA 23005

Location: Hanover County
Registration No.: 51018

Dear Mr. Dewechter:

Attached is a Title V permit renewal to operate your facility pursuant to 9 VAC 5 Chapter 80 of the Virginia Regulations for the Control and Abatement of Air Pollution. The attached permit will be in effect beginning June 17, 2021.

In the course of evaluating the application and arriving at a final decision to issue this permit, the Department of Environmental Quality (DEQ) deemed the application complete on April 20, 2021 and solicited written public comments by placing a newspaper advertisement in the Richmond Times Dispatch on May 12, 2021. The thirty-day required comment period, provided for in 9VAC5-80-670 expired on June 14, 2021.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all conditions carefully.

This permit approval to operate does not relieve Doswell Energy Center of the responsibility to comply with all other local, state, and federal permit regulations.

To review any federal rules referenced in the attached permit, the US Government Publishing Office maintains the text of these rules at [the CFR website](#), Title 40, Part 60.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

Mr. David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact the regional office at (804) 527-5020.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

KIW/hll/51018_027_32_TV_CoverLetter_06172021_FINAL.docx

Attachment: Permit

Ec: Tom He, Office of Permits and Air Toxics, U.S. EPA, Region III
Susan Tripp, Title V Program Specialist, OAPP
Dave Robinett, Manager/Eric Diebel, Inspector, Air Compliance



VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

4949-A Cox Road, Glen Allen, Virginia 23060

(804) 527-5020 FAX (804) 698-4178

www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

James J. Golden
Regional Director

Federal Operating Permit Article 3

This permit is based upon Federal Clean Air Act acid rain permitting requirements of Title IV, federal operating permit requirements of Title V; and Chapter 80, Article 3, and Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300, and 9 VAC 5-140-10 through 9 VAC 5-140-900 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Doswell Limited Partnership
Facility Name:	Doswell Energy Center
Facility Location:	10098 Old Ridge Road Ashland, Virginia
Registration Number:	51018
Permit Number:	PRO-51018

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 6 through 41)

Federally Enforceable Requirements - Title IV Acid Rain (Pages 41 through 46)

Federally Enforceable Requirements - CSAPR (Page 46 through 62)

State Only Enforceable Requirements – HAP/Toxics Rule (Page 62 through 63)

June 17, 2021
Effective Date

June 16, 2026
Expiration Date

Deputy Regional Director

June 17, 2021
Signature Date

Table of Contents, 1 page
Permit Conditions, 27 pages

Table of Contents

FACILITY INFORMATION	1
EMISSION UNITS	3
POWER PRODUCTION EQUIPMENT (COMBINED CYCLE COMBUSTION TURBINE FACILITY AND AUXILIARY EQUIPMENT) REQUIREMENTS- (EMISSION UNIT ID#S 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 61, 71, 111, AND 112):.....	6
SIMPLE CYCLE COMBUSTION TURBINE REQUIREMENTS - (EU ID#S 81/82/83/91/92/101/102):.....	17
FACILITY WIDE CONDITIONS	32
INSIGNIFICANT EMISSION UNITS.....	32
PERMIT SHIELD & INAPPLICABLE REQUIREMENTS	33
GENERAL CONDITIONS	34
TITLE IV (PHASE II ACID RAIN) PERMIT ALLOWANCES AND REQUIREMENTS.....	42
CSAPR REQUIREMENTS	46
STATE-ONLY ENFORCEABLE REQUIREMENTS	62

Facility Information

Permittee/Facility
Doswell Limited Partnership
10098 Old Ridge Road
Ashland, VA 23005

Responsible Official
Mr. Robert Dewechter
Asset Manager

Acid Rain Designated Representative and CSAPR/NOx Budget Trading Authorized Account Representative

Mr. Robert Dewechter
Director, Asset Management Doswell Limited Partnership
Asset Manager
USEPA ATS-AAR ID number 607206

RGGI: Ms. Kathy French (Initial Designated Representative)

Facility	Contact Person
Doswell Energy Center	Josh Manley
10098 Old Ridge Road	HSE Specialist
Ashland, VA 23005	(804) 227-2096

County-Plant Identification Number: 51-085-0061
ORIS Code and/or EIA Facility ID: 52019
NATS Facility Identification Number: 052019

Facility Description: NAICS 221112 – The facility is an independent power production facility. Natural gas is received via gas pipelines and backup No. 2 Fuel Oil is available to fire up four Kraftwerk Union V84.2 (120MW) – combined cycle combustion turbines and associated John Zinc duct burners and three GE 7FA simple cycle combustion turbines (CT-1, CT-2 and CT-3). The combined cycle turbines were permitted in a PSD permit originally issued on May 4, 1990 and last amended on February 2, 2021. The 190.5 MW natural gas and backup oil simple cycle combustion turbine (CT-1) was added in a separate PSD permit dated April 7, 2000 and last amended on October 19, 2020. The two 170.0 MW natural gas only simple cycle combustion turbines (CT-2 and CT-3) were added in a separate PSD permit dated October 4, 2016 and a follow-on permit to peak fire the two additional simple cycle combustion turbines and combine them in one PSD permit with CT1 dated October 19, 2020. The facility-wide potential emissions of hazardous air pollutants (HAP) are in excess of the major source thresholds (total HAPs greater than 25 TPY) when emissions from all the turbines are added to existing permitted emissions, so 40 CFR 63, Subpart YYYYY National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines applies. Other auxiliary equipment includes a natural gas-fired Zurn boiler rated at 40.0 mmBTU/hr, one Cummins-West emergency generator fueled by No. 2 Fuel Oil, One Caterpillar 3208 DITA Fire Pump fueled by No. 2 Fuel Oil and two (2) 7.6 million gallon fuel oil storage tanks. Fugitive VOC emissions due to fuel storage and handling are estimated to be less than 0.5 tons/yr. The four (4) combined cycle and three (3) simple cycle combustion turbines are subject to the acid rain requirements of which has been wrapped into the Federal Acid Rain Operating Permit (Article 3) and will not have a standalone Acid Rain Permit.

On November 16, 2015, EPA updated the CSAPR, proposing new Federal Implementation Plans (public comment period closed on February 1, 2016). Virginia at this time will implement the CSAPR requirements through the federal implementation plan (FIP) as per Chapter 291 of the 2011 Virginia Acts of Assembly and 40 CFR 97. All of the electric generating units are affected units under the FIP and will be required to comply with the trading program. The application and permit shield is in effect.

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity**	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
11	1	ID No. 501, Kraftwerk Union Combined Cycle Combustion Turbine (Model: V84.2) (Constructed: 5-1995) Firing no. 2 fuel oil with a maximum sulfur content of 0.05% - backup	1,237.2 mmBTU/hr. – input (*) 122 MW – output	Kraftwerk Union (steam injection) and Mitsubishi (SCR) 64% efficiency	501-11	NO _x	02/02/2021
12		Firing natural gas – primary	1,261.2 mmBTU/hr. – input (*) 122 MW – output	Kraftwerk Union (burner design) and Mitsubishi (SCR) 54% efficiency	501-12	NO _x	02/02/2021
13		ID No.501, Nooter-Erickson Heat Recovery Steam Generator (HRSG) with a John Zinc duct burner (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05% - backup	266 mmBTU/hr. – input (*) 500x10 ³ Lb/hr. steam output	Mitsubishi (SCR)64% efficiency Note: the duct burners are before the SCR. The SCR controls NO _x for both the CT and DB.	501-13	NO _x	02/02/2021
14		Firing natural gas -primary	241 mmBTU/hr.- input (*) 455 x 10 ³ Lb/hr. steam output	Mitsubishi (SCR)54% efficiency	501-14	NO _x	02/02/2021
21	2	ID No. 502, Kraftwerk Union Combined Cycle Combustion Turbine (Model: V84.2) (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05% - backup	1,237.2 mmBTU/hr. input (*) 122 MW – output	Kraftwerk Union (steam injection) and Mitsubishi (SCR) 64% efficiency	502-21	NO _x	02/02/2021
22		Firing natural gas – primary	1,261.2 mmBTU/hr. – input (*) 122 MW – output	Kraftwerk Union (burner design) and Mitsubishi (SCR) 54% efficiency	502-22	NO _x	02/02/2021
23		ID. No. 502, Nooter-Erickson Heat Recovery Steam Generator (HRSG) with a John Zinc duct burner (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05%-standby	266 mmBTU/hr – input (*) 500x10 ³ Lb/hr. steam output	Mitsubishi (SCR) 64% efficiency	502-23	NO _x	02/02/2021
24	2	Firing natural gas – primary	241 mmBTU/hr – input (*) 455x10 ³ Lb/hr. steam output	Mitsubishi (SCR) 54% efficiency	502-24	NO _x	02/02/2021
31	3	ID, No. 601, Kraftwerk Union Combined Cycle Combustion Turbine (Model: V84.2) (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05%-standby	1,237.2 mmBTU/hr. – input (*) 122 MW-output	SCR, steam injection and burner design Kraftwerk Union (steam injection and burner design) Mitsubishi (SCR) 64% efficiency	601-31	NO _x	02/02/2021

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity**	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
32		Firing natural gas-primary	1,261.2 mmBTU/hr – input (*) 122 MW – output	SCR, steam injection or burner design Kraftwerk Union (steam injection and burner design) Mitsubishi (SCR) 54% efficiency	601-32	NO _x	02/02/2021
33		ID. No. 601, Nooter-Erickson Heat Recovery Steam Generator (HRSG) with a John Zinc duct burner, (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05% - standby	266 mmBTU/hr. – input (*) 500x10 ³ Lb/hr. steam output	Mitsubishi (SCR) 64% efficiency	601-33	NO _x	02/02/2021
34		Firing natural gas – primary	241 mmBTU/hr input (*) 455x10 ³ Lb/hr. steam output	Mitsubishi (SCR) 54% efficiency	601-34	NO _x	02/02/2021
41	4 4	ID. No. 602, Kraftwerk Union Combined Cycle Combustion Turbine (Model: V84.2) (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05% - standby	1,237.2 mmBTU/hr (*) 122 MW – output	SCR, steam injection and burner design Kraftwerk Union (steam injection and burner design) Mitsubishi (SCR) 64% efficiency	602-41	NO _x	02/02/2021
42		Firing natural gas – primary	1,261.2 mmBTU/hr. – input (*) 122 MW – output	SCR, steam injection or burner design Kraftwerk Union (steam injection and burner design) Mitsubishi (SCR) 54% efficiency	602-42	NO _x	02/02/2021
43		ID. No. 602, Nooter-Erickson Heat Recovery Steam Generator (HRSG) with a John Zinc duct burner (Constructed: 6-1990) Firing no. 2 fuel with a maximum sulfur content of 0.05% - standby	266 mmBTU/hr – input (*) 500x10 ³ Lb/hr. steam output	Mitsubishi (SCR) 64% efficiency	602-43	NO _x	02/02/2021
44		Firing natural gas – primary	241 mmBTU/hr. – input (*) 455x10 ³ Lb/hr. steam output	Mitsubishi (SCR) 54% efficiency	602-44	NO _x	02/02/2021
52	5	Zurn Auxiliary boiler (Constructed: 6-1990) Firing natural gas	40 mmBTU/hr – input (°) 31,000 Lb/hr. steam output	-	-	-	02/02/2021
61	6	Caterpillar Fire Pump (Model: 3208 DITA) (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05%	1.44 mmBTU/hr. input (°) 145 BHP – output				

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity**	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
71	7	Cummins-West Emergency Generator (Model: KTTA-19-G2) (Constructed: 6-1990) Firing no. 2 fuel oil with a maximum sulfur content of 0.05%	4.26 mmBTU/hr. input (°) 500 kW – output 670 BHP	-	-	-	02/02/2021
81	8	ID. No. CT-1, G.E. Frame 7 Simple Cycle Combustion Turbine (Model: GE7FA) (Constructed: 2-2001) Firing No. 2 distillate oil with a maximum sulfur content of 0.05% - backup	2037 mmBTU/hr – input 190.5 MW – output	-	CT-1-81	-	02/02/2021
82		Firing natural gas – primary	1944.72 mmBTU/hr – input 185 MW – output	Burner design and water injection GE 61% efficiency	CT-1-82	NO _x	10/19/2020
83		Firing natural gas during peak firing – backup	1707.18 mmBTU/hr 166 MW – output	Burner design GE 92% efficiency	CT-1-83	NO _x	10/19/2020
91	9	Firing natural gas ID. No. CT-2, G.E. Frame 7 Simple Cycle Combustion Turbine (Model: GE7FA) (Constructed: 2001)	(HHV): 1,961.0 MMBtu/hr 170.0 MW – output	Burner design GE 87% efficiency	CT-2-91		10/19/2020
92		Firing natural gas during peak firing ID. No. CT-2, G.E. Frame 7 Simple Cycle Combustion Turbine (Model: GE7FA) (Constructed: 2001)	(HHV): 1,707.18 MMBtu/hr 166.0 MW – output	Burner design GE 92% efficiency	CT-2-92	NO _x	10/19/2020
101	10	Firing natural gas ID. No. CT-3, G.E. Frame 7 Simple Cycle Combustion Turbine (Model: GE7FA) (Constructed: 2001)	(HHV): 1,961.0 MMBtu/hr 170.0 MW – output	Burner design GE 87% efficiency	CT-3-101	NO _x	10/19/2020
102		Firing natural gas during peak firing ID. No. CT-3, G.E. Frame 7 Simple Cycle Combustion Turbine (Model: GE7FA) (Constructed: 2001)	(HHV): 1,707.18 MMBtu/hr 166.0 MW – output	Burner design GE 92% efficiency	CT-3-102	NO _x	10/19/2020
111		Cone Shaped Fixed Roof Fuel Oil Storage Tank A (Constructed: 6-1990)	7.6 million gallons	-	-	-	02/02/2021
112	NA	Cone Shaped Fixed Roof Fuel Oil Storage Tank B (Constructed: 6-1990)	7.6 million gallons	-	-	-	02/02/2021
CB-1 through CB-3	NA	Three Generator Breakers	161 lbs SF ₆ per breaker	-	-	-	02/02/2021

(*) Capacity rating based on lower heat rating of fuel. (°) Capacity rating based on higher heat rating of fuel.

**The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

Power Production Equipment (Combined Cycle Combustion Turbine Facility and Auxiliary Equipment) Requirements- (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 52, 61, 71, 111, and 112):

1. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, and 43/44) - Limitations** – Nitrogen oxide emissions from each combined cycle combustion turbine/heat recovery steam generator (HRSG) duct burner shall be controlled by either combustor design or steam injection followed by a selective catalytic reduction system when burning natural gas and by steam injection followed by selective catalytic reduction when burning distillate oil.
(9VAC5-80-110 and Condition 3 of 02/02/2021 Permit)
2. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44 and 52) - Limitations** – Sulfur dioxide emissions from each combined cycle combustion turbine/heat recovery steam generator (HRSG) duct burner shall be controlled by using distillate oil which has a sulfur content by weight of 0.05% or lower and by the use of natural gas as defined in condition no. 3.
(9VAC5-80-110 and Condition 4 of 02/02/2021 Permit)
3. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44 and 52) - Limitations** – The approved fuels for the facility are pipeline quality natural gas (natural gas that is provided by a supplier through a pipeline) and No. 2 fuel oil which has a sulfur content by weight of 0.05% or lower. A change in the fuel may require a permit to modify and operate.
(9VAC5-80-110 and Condition 24 of 02/02/2021 Permit)
4. **Power Production Equipment Requirements - (emission unit ID#s 111 and 112) - Limitations** – Volatile organic compound emissions from the No. 2 fuel oil storage tanks shall be controlled by a fixed roof design with a pressure vacuum valve.
(9VAC5-80-110 and Condition 5 of 02/02/2021 Permit)
5. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 61, 71, 111 and 112) - Limitations** - Visible emissions from each exhaust point at the combined cycle facility shall not exceed ten (10) percent opacity except during periods of start-up, shutdown and malfunction.
(9VAC5-80-110 and Condition 23 of 02/02/2021 Permit)
6. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 21/22, 31/32, and 41/42) - Limitations** – Each combined cycle combustion turbine shall consume no more than 11.9×10^9 cubic feet of natural gas or 20.6×10^6 gallons of No. 2 fuel oil per year, calculated monthly as the sum of each consecutive twelve (12) month period. No.2 fuel oil usage shall be limited to 2,160 hours per year, calculated monthly as the sum of each consecutive 12 month period.
(9VAC5-80-110 and Condition 6 of 02/02/2021 Permit)
7. **Power Production Equipment Requirements - (emission unit ID#s 13/14, 23/24, 33/34, and 43/44) - Limitations** – Each duct burner shall consume no more than 1.6×10^9 cubic feet of natural gas or 4.43×10^6 gallons of No. 2 fuel oil per year, calculated monthly as the sum of each consecutive twelve (12) month period, based on the lower heating value of the fuels.

No.2 fuel oil usage shall be limited to 2,160 hours per year, calculated monthly as the sum of each consecutive 12 month period.
(9VAC5-80-110 and Condition 7 of 02/02/2021 Permit)

8. **Power Production Equipment Requirements - (emission unit ID# 52) - Limitations** – The auxiliary boiler shall consume no more than 3.50×10^8 cubic feet of natural gas per year, calculated monthly as the sum of each consecutive twelve (12) month period.
(9VAC5-80-110 and Condition 8 of 02/02/2021 Permit)
9. **Power Production Equipment Requirements - (emission unit ID# 71) - Limitations** - The emergency generator shall consume no more than 30,967 gallons of No. 2 fuel oil per year, calculated monthly as the sum of each consecutive twelve (12) month period.
(9VAC5-80-110 and Condition 9 of 02/02/2021 Permit)
10. **Power Production Equipment Requirements - (emission unit ID#s 11, 21, 31, 41, 61, and 71) - Limitations** - The emergency generator and the fire pump shall operate no more than two (2) hours in any given twenty four hour period concurrently with the operation of the combined cycle combustion turbines on distillate oil, except during an emergency.
(9VAC5-80-110 and Condition 10 of 02/02/2021 Permit)
11. **Power Production Equipment Requirements - (emission unit ID# 61) - Limitations** - The emergency fire water diesel pump shall consume no more than 10,468 gallons of No. 2 fuel oil per year, calculated monthly as the sum of each consecutive twelve (12) month period.
(9VAC5-80-110 and Condition 11 of 02/02/2021 Permit)
12. **Power Production Equipment Requirements - (emission unit ID# 11/12, 21/22, 31/32, 41/42) - Limitations** – No combined cycle combustion turbine shall operate at less than conditions corresponding to 65 percent of maximum load, except during start-up, shutdown, malfunction and emergency situations. Please note that maximum load of the combustion turbine is corrected to ambient conditions.
(9VAC5-80-110 and Condition 12 of 02/02/2021 Permit)
13. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 21/22, 31/32, and 41/42) - Limitations** – Criteria pollutant emissions from the operation of each of the combined cycle turbines shall not exceed the limitations specified below:

Combined Cycle Combustion Turbine Operating on Natural Gas

PM (Total Suspended Particulate)	2.6×10^{-2} lbs/10 ⁶ BTU	33.0 lbs/hr/turbine
PM-10 (Total)	2.6×10^{-2} lbs/10 ⁶ BTU	33.0 lbs/hr/turbine
Sulfur Dioxide	2.9×10^{-3} lbs/10 ⁶ BTU	3.7 lbs/hr/turbine
Carbon Monoxide	—	25.0 lbs/hr/turbine
Volatile Organic Compounds	—	4.4 lbs/hr/turbine

NOx emissions limits shall be calculated as stated in condition 15 of Part I of this permit.

Combined Cycle Combustion Turbine Operating on No. 2 Oil

PM (Total Suspended Particulate)	2.0×10^{-2} lbs/10 ⁶ BTU	24.7 lbs/hr/turbine
PM-10 (Total)	2.0×10^{-2} lbs/10 ⁶ BTU	24.7 lbs/hr/turbine
Sulfur Dioxide	5.71×10^{-2} lbs/10 ⁶ BTU	70.6 lbs/hr/turbine
Carbon Monoxide	—	29.0 lbs/hr/turbine
Volatile Organic Compounds	—	7.8 lbs/hr/turbine
Pb	—	1.7×10^{-2} lbs/hr/turbine

NO_x emission limits shall be calculated as stated in condition 15 of this permit. When oil and natural gas are fired simultaneously, total emissions limits for the combination of a combined cycle combustion turbine and duct burner shall not exceed the sum of applicable fuel specific emission limits specified in conditions 13 and 14. (9VAC5-80-110 and Condition 13 of 02/02/2021 Permit)

14. **Power Production Equipment Requirements - (emission unit ID#s 13/14, 23/24, 33/34, and 43/44) - Limitations** – Criteria pollutant emissions from each duct burner shall not exceed the limitations specified below:

Natural Gas

PM (Total Suspended Particulate)	1.92×10^{-2} lbs/10 ⁶ BTU	4.6 lbs/hr/duct burner
PM-10 (Total)	1.92×10^{-2} lbs/10 ⁶ BTU	4.6 lbs/hr/duct burner
Sulfur Dioxide	3.1×10^{-3} lbs/10 ⁶ BTU	0.8 lbs/hr/duct burner
Carbon Monoxide	—	19.7 lbs/hr/duct burner
Volatile Organic Compounds	—	2.4 lbs/hr/duct burner

No. 2 Fuel Oil

PM (Total Suspended Particulate)	3.0×10^{-2} lbs/10 ⁶ BTU	8.0 lbs/hr/duct burner
PM-10 (Total)	3.0×10^{-2} lbs/10 ⁶ BTU	8.0 lbs/hr/duct burner

No. 2 Fuel Oil

Sulfur Dioxide	5.71×10^{-2} lbs/10 ⁶ BTU	15.2 lbs/hr/duct burner
Carbon Monoxide	—	27.0 lbs/hr/duct burner
Volatile Organic Compounds	—	24.0 lbs/hr/duct burner
Pb	—	0.005 lbs/hr/duct burner

When oil and natural gas are fired simultaneously (note: duct burners do not have the capability to burn natural gas and oil simultaneously), total emission limits for the combination of a combined cycle combustion turbine and duct burner shall not exceed the sum of applicable fuel specific emission limits specified in conditions 13 and 14. (9VAC5-80-110 and Condition 14 of 02/02/2021 Permit)

15. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42 and 43/44) – Limitations** – Except during periods of startup and shutdown, the combined cycle combustion turbine/duct burner combination Nitrogen Oxide (NO_x) emissions shall not exceed the emission limit resulting from the calculation of the following from the equation in ppmvd corrected to 15% O₂:

$$E_s = \frac{[(H_{db-gas} * 0.10) + (H_{db-oil} * 0.12) + (H_{ct-gas} * 0.0332) + (H_{ct-oil} * 0.1166)] * 5.9}{(1.194 * 10^{-7}) * [8710 * (H_{db-gas} + H_{ct-gas}) + 9190 * (H_{db-oil} + H_{ct-oil})] * 20.9}$$

E_s is the allowable emissions in ppm @ 15% O₂

H_{db-gas} is the heat input to the duct burner from natural gas (mmBTU/hr),

H_{db-oil} is the heat input to the duct burner from oil (mmBTU/hr),

H_{ct-gas} is the heat input to the combined cycle combustion turbine natural gas (mmBTU/hr)

H_{ct-oil} is the heat input to the combined cycle combustion turbine from oil (mmBTU/hr)

The NO_x emissions shall be less than or equal to the calculated allowable limit 95% of the time (excluding periods of start-up shut down and malfunction and combined cycle combustion turbine/HRSG duct burner work practices as described in condition 33). (9VAC5-80-110 and Condition 15 of 02/02/2021 Permit)

16. **Power Production Equipment Requirements - (emission unit ID#s 52) - Limitations** – Emissions from the operation of the auxiliary boiler shall not exceed the limitations below:

	Natural Gas LBS/10 ⁶ BTU	LBS/HR
PM (Total Suspended Particulate)	0.02	0.9
PM-10 (Total)	0.02	0.9
Sulfur Dioxide	0.003	0.1
Nitrogen Oxides	0.12	4.9
Carbon Monoxide	—	11.0
Volatile Organic Compounds	—	5.1

(9VAC5-80-110 and Condition 16 of 02/02/2021 Permit)

17. **Emergency Engine Requirements - (emission unit ID#s 61) - MACT ZZZZ- National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines Requirements** - Except as specified in this permit, the facility is to be operated in compliance with all applicable Federal requirements under 40 CFR 63, Subpart ZZZZ. The permittee shall operate the emergency diesel pump (emission unit 61) compliant with:

- a. Maintenance practices under 40 CFR 63.6602, Table 2d,
- b. Maintenance and operation practices, monitoring by a non-resettable hour meter, operating conditions, and management practices under 40 CFR 63.6625(e),(f),(h), and (i)
- c. Continuous compliance requirements under 40 CFR 63.6605 and 40 CFR 63.6640
- d. Recordkeeping requirements under 40 CFR 63.6655 (except 63.6655(b) and (c))
- e. Reporting requirements under 40 CFR 63, footnote 1 of Table 2c.

(9VAC5-80-110 and 40 CFR 63 Subpart ZZZZ)

18. **Power Production Equipment Requirements - (emission unit ID# 71) - Limitations** – Emissions from the operation of the emergency generator shall not exceed the limitations below:

	LBS/10 ⁶ BTU	LBS/HR
Sulfur Dioxide	—	0.2
Nitrogen Oxides	4.22	18.0
Carbon Monoxide	—	2.0
Volatile Organic Compounds	—	0.6

(9VAC5-80-110 and Specific Condition 17 of 02/02/2021 Permit)

19. **Power Production Equipment Requirements - (emission unit ID# 61) - Limitations** – Emissions from the operation of the emergency diesel pump shall not exceed the limitations below:

	LBS/10 ⁶ BTU	LBS/HR
Nitrogen Oxides	2.45	3.5
Carbon Monoxide	—	0.5

(9VAC5-80-110 and Condition 18 of 02/02/2021 Permit)

20. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 51/52, 71, 111 and 112) - Limitations** – Notwithstanding conditions 13, 14, 15, 16, and 18 of this permit, at no time shall total Volatile Organic Compound (VOC) emissions for the entire combined cycle facility exceed 213 tons per year. The Volatile Organic Compound emissions shall be calculated as follows:

$$\text{VOC} = (\text{NG}_{(\text{ct})})(0.003 \text{ lbs}/10^3 \text{ ft}^3) + (\text{NG}_{(\text{db})})(0.009 \text{ lbs}/10^3 \text{ ft}^3) + (\text{NG}_{(\text{ab})})(0.12 \text{ lbs}/10^3 \text{ ft}^3) + (\text{FO}_{(\text{ct})})(0.82 \text{ lbs}/10^3 \text{ gal})$$

$$+ (FO_{(db)}) (11.82 \text{ lbs}/10^3 \text{ gal})$$

$$+ (FO_{(dg)}) (19.60 \text{ lbs}/10^3 \text{ gal}) + (FO_{(st)})$$

Where:

NG_(ct) is the amount of natural gas fired in the combined cycle combustion turbine (10³ scf),

NG_(db) is the amount of natural gas fired in the duct burner (10³ scf),

NG_(ab) is the amount of natural gas fired in the auxiliary boiler (10³ scf),

FO_(ct) is the amount of fuel oil fired in the combined cycle combustion turbines (10³ gallons),

FO_(db) is the amount of fuel oil fired in the duct burner (10³ gallons)

FO_(dg) is the amount of fuel oil fired in the diesel generator (10³ gallons), and

FO_(st) is the amount of VOCs emitted during storage and handling of fuel oil (lbs.)

(9VAC5-80-110 and Condition 19 of 02/02/2021 Permit)

21. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 52, 61, and 71) - Limitations** – Notwithstanding conditions 15, 16, 18, and 19 of this permit, at no time shall total nitrogen dioxide emissions for the entire combined cycle facility exceed 1,666.7 tons per year. The nitrogen dioxide emissions shall be calculated as follows:

$$NO_x = (NG_{(ct)}) (0.0332 \text{ lbs}/10^6 \text{ BTU})^{(1)}$$

$$+ (NG_{(db)}) (0.10 \text{ lbs}/10^6 \text{ BTU})^{(1)}$$

$$+ (NG_{(ab)}) (0.12 \text{ lbs}/10^3 \text{ BTU})^{(1)}$$

$$+ (FO_{(ct)}) (0.1166 \text{ lbs}/10^6 \text{ BTU})^{(1)}$$

$$+ (FO_{(db)}) (0.12 \text{ lbs}/10^6 \text{ BTU})^{(1)}$$

$$+ (FO_{(dg)}) (4.22 \text{ lbs}/10^6 \text{ BTU})$$

$$+ (FO_{(dp)}) (2.45 \text{ lbs}/10^6 \text{ BTU})$$

Where:

NG_(ct) is the heat input to the gas turbine from natural gas (10⁶ BTU),

NG_(db) is the heat input to the duct burner from natural gas (10⁶ BTU),

NG_(ab) is the heat input to the auxiliary boiler from natural gas (10⁶ BTU),

FO_(ct) is the heat input to the combined cycle turbine from fuel oil (10⁶ BTU),

FO_(db) is the heat input to the duct burner from fuel oil (10⁶ BTU)

FO_(dg) is the heat input to the diesel generator from fuel oil (10⁶ BTU), and

FO_(dp) is the heat input to the diesel pump from fuel oil (10⁶ BTU)

- (1) Emissions calculated from continuous emission monitors which meet the requirements of 40 CFR Part 75, Appendix A in lieu of 40 CFR Part 60, Appendix B, Performance Specification 2 may be substituted in the above equation for the combined duct burner and combustion turbine emissions.

(9VAC5-80-110 and Condition 20 of 02/02/2021 Permit)

22. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 52, 61, 71, 111 and 112) - Limitations** – The entire combined cycle facility's emissions shall not exceed the following calculated as the sum of each consecutive 12 month period:

TONS/YR

PM (TSP)

623.0

PM10	623.0
SO ₂	432.6**
NO _x	1,666.7
CO	706.0
VOC	213.0
Pb	0.40

** This is the maximum SO₂ emission limit unless the summation of the calendar year amount calculated from the formula in Condition 24 of this permit is lower.

(9VAC5-80-110 and Specific Condition 21 of 02/02/2021 Permit)

23. **Power Production Equipment Requirements - (emission unit ID# 13, 23, 33, 43, and 52) – Monitoring/Recordkeeping** - After September 30, 1993 the maximum allowable sulfur content of the No. 2 fuel oil purchased shall not exceed 0.05% by weight. Doswell Limited Partnership shall maintain records of all oil shipments purchased, indicating sulfur content per shipment. These records shall be available on site for inspection by department personnel. They shall be kept on file for the most current five (5) year period.
(9VAC5-80-110, 40 CFR 60 Subpart Dc, and Specific Condition 25 of 02/02/2021 Permit)

24. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 21/22, 31/32, and 41/42) – Limitations/Monitoring/Recordkeeping** – Based on the gas analysis for sulfur content, annual allowable sulfur dioxide emissions shall be calculated as follows:

Combined Cycle Combustion Turbine Per Unit:

$$\text{Dec.} \\ \text{SO}_2 = \sum \frac{\text{SCFNG}}{\text{Jan. Month}} \times \frac{\text{Grains Total Sulfur}}{\text{SCF}} \times \frac{1 \text{ Pound}}{7,000 \text{ Grains}}$$

$$\times \frac{1 \text{ Ton}}{2,000 \text{ Pounds}} \times \frac{2 \text{ Tons SO}_2}{\text{Ton S}} + 76.2$$

Duct Burner Per Unit:

$$\text{Dec.} \\ \text{SO}_2 = \sum \frac{\text{SCFNG}}{\text{Jan. Month}} \times \frac{\text{Grains Total Sulfur}}{\text{SCF}} \times \frac{1 \text{ Pound}}{7,000 \text{ Grains}}$$

$$\times \frac{1 \text{ Ton}}{2,000 \text{ Pounds}} \times \frac{2 \text{ Tons SO}_2}{\text{Ton S}} + 16.4$$

Auxiliary Boiler:

$$\text{Dec.} \\ \text{SO}_2 = \sum \frac{\text{SCFNG}}{\text{Jan. Month}} \times \frac{\text{Grains Total Sulfur}}{\text{SCF}} \times \frac{1 \text{ Pound}}{7,000 \text{ Grains}}$$

$$\times \frac{1 \text{ Ton}}{2,000 \text{ Pounds}} \times \frac{2 \text{ Tons SO}_2}{\text{Ton S}} + 2.3$$

Doswell Limited Partnership shall keep monthly records of natural gas consumption for each of the above units and total sulfur analysis for the purpose of computing the allowable emission rates. The sulfur analysis shall be performed in accordance with the alternative sampling schedule that has been approved by the Environmental Protection Agency.
(9VAC5-80-110 and, 40 CFR 60.333 and Condition 26 of 02/02/2021 Permit)

25. **Power Production Equipment Requirements - (emission unit ID#s 13/14, 23/24, 33/34, 43/44, 11/12, 21/22, 31/32, and 41/42) - Monitoring** – Continuous emission monitoring systems (CEMS) shall be installed on each HRSG exhaust stack to measure and record, the concentration of nitrogen oxides and oxygen emitted from the combined combustion turbine and duct burner exhaust. They shall be maintained and calibrated in accordance with 40 CFR Part 75, Appendix B in lieu of 40 CFR Part 60, Appendix B and Appendix F. A 30 day notification prior to the demonstration of continuous monitoring system performance and subsequent notification requirements, are to be submitted to the Department (Director, Piedmont Regional Office).
(9VAC5-80-110 and Specific Condition 27 of 02/02/2021 Permit)
26. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, and 43/44) - Monitoring** – Continuous monitoring systems shall be installed to monitor and record the fuel oil and natural gas consumption as required in the alternative monitoring plan approved by US EPA. The monitoring systems shall be in operation at all times when the combined cycle turbines or turbine/duct burner combination are in operation. They shall be maintained and calibrated in accordance with the manufacturer's specifications.
(9VAC5-80-110 and Condition 28 of 02/02/2021 Permit)
27. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 21/22, 31/32, and 41/42) – Monitoring/Recordkeeping** – Doswell Limited Partnership shall monitor the sulfur content of the No. 2 fuel oil being fired in the combined cycle combustion turbines in accordance with 40 CFR 60 Section 60.334(b) [and 60.334(h)(4)]. In accordance with the approved modified testing schedule Doswell Limited Partnership shall monitor the natural gas sulfur content twice per annum during the first and third quarter of each calendar year. If any sulfur analysis indicates noncompliance with 40 CFR 60.333 the owner or operator shall notify the US EPA Regional Office Air Division and the Piedmont Regional Office of such excess emissions and custom fuel monitoring schedule shall be conducted weekly during the interim period when this custom schedule is being re-examined. A change in the fuel supply shall also cause a review of the custom fuel-monitoring schedule. Records associated with the custom fuel-monitoring schedule shall be retained for a period of five (5) years.
(9VAC5-80-110 and Condition 29 of 02/02/2021 Permit)
28. **Power Production Equipment Requirements – (emission unit ID #s 11/12, 21/22, 31/32, and 41/42) – Monitoring/Reporting** – Doswell Limited Partnership shall submit to the Department (Director, Piedmont Regional Office) reports during periods of excess emissions as required under Section 60.334(c)(2) and (3) of 40 CFR 60 Subpart GG every calendar quarter and as required in the approved alternative compliance plan. Doswell Limited Partnership shall submit and report excess NO_x emissions on a quarterly basis. Excess emissions shall be calculated as expressed in condition 15. In addition NO_x emission monitors shall be available at least 90% of the source operating time (excluding the period of time that the quality assurance check is being conducted). The CEM availability shall be calculated as follows:

$$A^* = \frac{\sum Hc}{\sum Ho} \times 100$$

Where:

A*: is the percent of time that the CEM was available,
Hc: is the number of hours the CEM collected valid data and
Ho: is the number of hours that the combined cycle combustion turbine operated.
* The hours of valid data and the operating hours shall be summed over the most recent four quarters.

The NO_x emissions shall be less than or equal to the calculated allowable limit 95% of the time (excluding periods of start-up, shut down and malfunction). The percent of the time that emissions are less than or equal to allowable limits shall be calculated as follows:

$$C^* = \left(1 - \frac{\sum H_e}{\sum H_v} \right) \times 100$$

Where C is the percent of time that emissions are less than or equal to allowable limits,

H_e is the number of hours that emissions are greater than allowable limits, and
H_v is the number of hours that the CEM was collecting valid data.

* The number of hours that emissions are greater than allowable limits and the hours of valid data shall be summed over the most recent four quarters.

(9VAC5-80-110 and Condition 30 of 02/02/2021 Permit)

29. **Power Production Equipment Requirements - (emission unit ID# 13, 23, 33, and 43) - Reporting** - Thirty days after the end of each calendar quarter in which there are opacity excess emissions during oil combustion, Doswell will submit an excess emission report (EER) to the Department (Director, Piedmont Regional Office) and the US EPA-Region III. If there are no opacity excess emissions during a calendar quarter, EERs will be submitted on a semiannual basis. For reporting purposes, excess emissions are defined as any six minute period during which the average opacity exceeds 10 percent, except during startup, shutdown or malfunction, and EERs will indicate the total time of the visible emission observations during a calendar quarter and identify the duration of any excess emissions (9VAC5-80-110 and Condition 31 of 02/02/2021 Permit)
30. **Power Production Equipment Requirements - (emission unit ID #s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42, 43/44, 52, 61, 71, and 81/82/83) – Limitations, Monitoring, Recordkeeping and Reporting** - Doswell Limited Partnership shall meet all applicable requirements of 40 CFR Part 60 Subpart GG – Standards of Performance for Stationary Gas Turbines and 40 CFR Part 60 Subpart Da – Standards of Performance for Electric Utility Steam Generating Units, except as provided in the federally approved alternative monitoring method for opacity and NO_x emissions from the combined cycle combustion turbines/HRSG duct burner firing; and 40 CFR Part 60, and Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. (9VAC5-80-110 and Condition 32 of 02/02/2021 Permit)
31. **Power Production Equipment Requirements - (emission unit ID#s 13, 23, 33, and 43) - Monitoring** - Doswell Limited Partnership shall conduct opacity observations when oil is combusted in the duct burners. The opacity observation shall be conducted as a replacement for the continuous opacity monitor required in 40 CFR Subpart Da. The opacity observation shall be conducted at least once during each daylight shift that duct

burners combust oil. The observer shall be certified in accordance with EPA Reference Test Method 9. The observation shall, at a minimum, consist of a six (6) minute visible emission observation recording the stack opacity readings every 15 seconds as required by Method 9 procedures. If the average opacity for a six (6) minute set of opacity readings exceeds 10%, the qualified VEE observer shall collect two additional six (6) minute sets of visible emissions readings for a total of three (3) sets.

(9VAC5-80-110 and, 40 CFR 60 Subpart Da and Specific Condition 33 of 02/02/2021 Permit)

32. **Power Production Equipment Requirements - (emission unit ID# 13, 23, 33, and 43) – Monitoring/Recordkeeping** - Doswell Limited Partnership will record the quantity of distillate oil burned for each duct burner each calendar quarter and include this information in the EERs. If, based upon this information, the distillate oil annual capacity factor ever exceeds 10 percent for any of the duct burners, Doswell will no longer qualify to use this opacity monitoring alternative at that duct burner, and the company will propose a schedule for re-certifying the continuous opacity monitor for the affected duct burner. The alternative opacity monitoring approval is valid only during operation on distillate oil, and the alternative may not be used if any other liquid or solid fuels are burned. All records required by this alternative opacity monitoring method shall be maintained for a period of five (5) years.
(9VAC5-80-110 and Condition 34 of 02/02/2021 Permit)

33. **Power Production Equipment Requirements - (emission unit ID#s 11/12, 13/14, 21/22, 23/24, 31/32, 33/34, 41/42 and 43/44) – Startup/Shutdown** – The short-term emission limits for the combined cycle combustion turbine/HRSG duct burners contained in Conditions 13 and 15 apply at all times except during periods of startup and shutdown.

- a. Startup and shutdown periods for combined cycle combustion turbine are defined as follows:
- i. Cold Startup – refers to restarts made 48.0 hours or more after shutdown. Exclusion from the short-term emissions limits for cold startup periods shall not exceed 5.0 hours of CEMS data per occurrence.
 - ii. Warm Startup – refers to restarts made more than 12.0 but less than 48.0 hours after shutdown. Exclusion from the short-term emissions limits for warm startup periods shall not exceed 4.0 hours of CEMS data per occurrence.
 - iii. Hot Startup – refers to restarts made 12.0 hours or less after shutdown. Exclusion from the short-term emissions limits for hot startup periods shall not exceed 3.0 hours of CEMS data per occurrence.
 - iv. Shutdown – refers to the period between the time the turbine load drops below 65 percent maximum operating load level and the fuel supply to the turbine is cut. Exclusion from the short-term emissions limits for shutdown shall not exceed 2.0 hours of CEMS data per occurrence.
- b. The permittee shall operate the Continuous Emission Monitoring Systems (CEMS) for the combined cycle combustion turbines during periods of startup and shutdown.

- c. A "startup" is also defined as when the unit reduces load and switches from operation on one fuel to operation on another fuel and shall not last more than 2.0 hours of CEMS data per occurrence.
- d. A "startup" is also defined as when the unit reduces load and switches from one operational mode to another mode and shall not last more than 2.0 hours of CEMS data per occurrence.
- e. If the SCR was not engaged during startup of a particular combustion turbine (including ammonia injection), the failure of that startup shall be considered a cold startup as defined in this condition.
- f. The permittee shall record the time, date and duration of each startup and shutdown period.
- g. The permittee shall operate the facility to minimize the frequency and duration of startup and shutdown events.

At all times, including periods of startup and shutdown for the combined cycle combustion turbines, the NOx emission limitations set forth in the NSPS 40 CFR 60 Subpart GG apply to the combined cycle combustion turbines. This permit does not exclude the permittee from meeting the NOx requirements in 40 CFR 60, the NSPS Subpart GG, for startup and shutdown. The permittee is subject to all requirements of NSPS 40 CFR 60 NSPS Subpart GG. The NSPS at §60.334 (j) states that excess emissions shall be reported for all periods of unit operation, including startup, shutdown, and malfunction. Compliance with §9 VAC 5-40-20E and §9 VAC 5-50-20E requires the facility to have written procedures and a training plan in place to minimize the occurrences, magnitude and/or duration of excess emissions. During periods of startup, shutdown and malfunction, the facility will demonstrate compliance with this permit by meeting the following combined cycle combustion turbine work practice standards:

Operating Scenario	Work Practice
Startup	Operate continuous emission and fuel flow monitoring systems. Start SCR system as soon as possible to comply with relevant standards during normal modes of operation. Keep records of NOx emissions, fuel use and times the facility was operated within the definition of startup.
Shutdown	Operate continuous emission and fuel flow monitoring systems. Keep records of NOx emissions, fuel use and times the facility was operated within the definition of shutdown.
Malfunction	Operate continuous emission and fuel flow monitoring- systems. Keep records of NOx emissions, fuel use and times malfunction occurred.

(9VAC5-80-110 and Specific Condition 35 of 02/02/2021 Permit)

34. **Power Production Equipment Requirements - (emission unit ID# 11/12, 21/22, 31/32, 41/42, 52, 61, and 71) – Monitoring/Recordkeeping** - The emissions from exhaust stacks (except the duct burner exhaust stacks) shall be observed visually at least once each calendar month for at least a brief time period during normal operations to determine if they have

above normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded. If an emission point is not operated during the calendar month, then no visible emission observation needs to be performed and a negative declaration shall be entered in the record stating the emission unit was not in operation. Should emission point operation be limited or intermittent, and/or adverse conditions (e.g. weather or darkness) prevail during the limited or intermittent operating period, no visible emission observation needs to be performed and a negative declaration shall be entered in the record along with the date(s) of operation, the hours of operation of the emission unit and a notation indicating inclement weather.
(9VAC5-80-110)

35. **Power Production Equipment Requirements - (emission unit ID#s 111 & 112) – Monitoring/Recordkeeping** - Records shall be kept demonstrating the pressure vacuum valves for fuel oil storage tanks A and B are in good operating order and the fixed roofs are in acceptable condition.
(9VAC5-80-110)
36. **Power Production Equipment Requirements - (emission unit ID# 52) – Monitoring/Recordkeeping** - Monthly records shall be kept of the amount of natural gas combusted during each calendar month in the auxiliary boiler.
(9VAC5-80-110 and 40 CFR 60.48 c(g)(2))
37. **Power Production Equipment Requirements - (emission unit ID# 13/14, 23/24, 33/34, and 43/44) – Monitoring/Recordkeeping** - The duct burners will be maintained as according to procedures and schedules recommended by the manufacturer. Records shall be kept demonstrating maintenance has been performed.
(9VAC5-80-110 and Alternative Opacity Monitoring Method per NSPS Da -March 1998)
38. **Power Production Equipment Requirements - (emission unit ID# 11/12, 21/22, 31/32, 41/42, 13/14, 23/24, 33/34, 43/44, 52, 61, 71, 111 and 112) – Monitoring/Recordkeeping** - The permittee shall retain records of all emission data and operating parameters required to be monitored by the terms of this permit. These records shall be maintained by the source for the most current five (5) year period.
(9VAC5-80-110 and General Condition 3 of 02/02/2021 Permit)

Simple Cycle Combustion Turbine Facility Requirements - (emission unit ID#s 81/82/83/91/92/101/102):

39. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – Nitrogen oxide (NO_x) emissions from the simple cycle combustion turbines (ref. no. 82, 91 and 101) shall be controlled by the utilization of a dry low NO_x combustor when firing natural gas with a NO_x performance of 9.0 ppmvd at 15% O₂ (GE Mode 6) at all times except during startup and shutdown, as defined in Condition 55 and tuning as defined in Condition 56. Nitrogen oxide (NO_x) emissions from the simple cycle combustion turbine (ref. no. 83, 92 and 102) shall be controlled by the utilization of a dry low NO_x combustor when peak firing natural gas with a NO_x performance of 15.0 ppmvd at 15% O₂. Nitrogen

oxide (NO_x) emissions from the simple cycle combustion turbine (ref. no. 81) shall be controlled by the utilization of water injection when firing No. 2 distillate fuel oil with a NO_x performance of 42.0 ppmvd @ 15 % O₂. The low NO_x burners shall be installed and operated in accordance with manufacturer's specifications. The simple cycle combustion turbines and ancillary equipment shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 1 of 10/19/2020 Permit)

40. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – Particulate Matter (PM₁₀, PM_{2.5}) emissions from each of the simple cycle combustion turbines (ref. no. 82, 83, 91, 92, 101 and 102) shall be controlled by the use of clean burning fuels and good combustion practices (e.g., controlled fuel/air mixing, adequate temperature, and gas residence time) and the use of pipeline-quality natural gas with a maximum sulfur content of one (1) grain per 100 standard cubic feet (scf). Particulate matter (PM) emissions from the simple cycle combustion turbine (ref. no. 81) shall be controlled by the use of clean burning fuels and good combustion operating practices. (9VAC5-80-110 and Condition 2 of 10/19/2020 Permit)
41. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – Greenhouse gas emissions (including carbon dioxide, methane, and nitrous oxide), as CO_{2e} from the simple cycle combustion turbines (ref. no. 82, 91 and 101) shall be controlled by the use of low carbon fuel (natural gas), high efficiency design and good combustion operating practices (e.g., controlled fuel/air mixing, adequate temperature, and gas residence time). (9VAC5-80-110 and Condition 3 of 10/19/2020 Permit)
42. **Power Production Equipment Requirements - (emission unit ID# 82/91/101) - Limitations** – Carbon monoxide (CO) emissions from the simple cycle combustion turbines (ref. no. 82, 91 and 101) shall be controlled by the use of clean burning fuels and good combustion practices (e.g., controlled fuel/air mixing, adequate temperature, and gas residence time) and the use of pipeline-quality natural gas. The simple cycle combustion turbines and ancillary equipment shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 4 of 10/19/2020 Permit)
43. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – Sulfur dioxide (SO₂) emissions from each of the simple cycle combustion turbines (ref. no. 82, 83, 91, 92, 101 and 102) shall be controlled by the use of pipeline-quality natural gas with a maximum sulfur content of one (1) grain per 100 standard cubic feet (scf). Sulfur dioxide emissions from the simple cycle combustion turbine (ref. no. 81) when firing No. 2 distillate fuel oil shall be controlled by the use of low sulfur No. 2 distillate fuel oil. (9VAC5-80-110 and Condition 5 of 10/19/2020 Permit)
44. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – Volatile organic compounds (VOC) emissions from the simple cycle combustion turbines (ref. no. 82, 83, 91, 92, 101 and 102) shall be controlled by the use of good combustion operating practices (e.g., controlled fuel/air mixing, adequate temperature, and gas residence time). Volatile organic compound emissions from the simple cycle combustion turbine (ref. no. 81) shall be controlled by the use of good combustion operating practices. (9VAC5-80-110 and Condition 6 of 10/19/2020 Permit)

45. **Power Production Equipment Requirements - (emission unit ID# CB-1 through CB-3) - Limitations** – Greenhouse gas emissions (i.e. SF₆) from the three generator breakers (CB-1 through CB-3) shall have a maximum annual leakage rate of 1.0 percent, and a low pressure detection system (with alarm) to detect SF₆ leakage. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The low pressure detection system shall be in operation when the circuit breakers are in use. If low pressure is detected, permittee shall perform maintenance as required to ensure compliance with this permit requirement. The permittee shall keep a log of the alarm system activation events and the corrective actions taken.
(9VAC5-80-110 and Condition 7 of 10/19/2020 Permit)
46. **Power Production Equipment Requirements - (emission unit ID# 82/91/101) - Limitations** – Fugitive emissions from natural gas piping components (valves and flanges) located in the project facility (ref. no. 82, 91 and 101) shall be minimized by using best management practices to prevent, detect and repair leaks of natural gas from the piping components. The permittee shall implement a daily auditory/ visual/olfactory (AVO) inspection program for detecting leaking in natural gas piping components. The first attempt to repair any component found to be leaking during an AVO inspection shall be made within 5 days. The leaking component shall be repaired within 15 days of discovery. The permittee shall maintain a list of difficult to repair components, which when leaking, the repair requires facility shutdown or cannot otherwise be completed within 15 days of discovery. Documentation justifying the inclusion of a component on the list shall be included. Records of the daily AVO inspection results, repair attempts, and the list of long-term leaking components and reason for each delay shall be maintained on site. The AVO plan shall be submitted for review no later than 60 days prior to start-up of the facility.
(9VAC5-80-110 and Condition 8 of 10/19/2020 Permit)
47. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – The approved fuel for the simple cycle combustion turbines (ref. no. 82, 83, 91, 92, 101 and 102) is pipeline-quality natural gas with a maximum sulfur content of one (1) grain per 100 standard cubic feet (scf). The approved fuel for the simple cycle combustion turbine (ref. no. 81) is No. 2 distillate fuel oil. Distillate oil is defined as fuel oil that meets the specifications for Fuel Oil Numbers 1 or 2 under the American Society for Testing and Materials, ASTM 396 Standard Specifications for Fuel Oils, or other approved ASTM method, incorporated in 40 CFR 60 by reference. The maximum sulfur content of the oil purchased to be fired in the simple cycle combustion turbine (ref. no. 81) shall not exceed 0.05 weight percent per shipment. A change in the fuel may require a permit to modify and operate.
(9VAC5-80-110 and Condition 9 of 10/19/2020 Permit)
48. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – The permittee shall monitor the sulfur content of the natural gas being fired in the simple cycle combustion turbines (ref. no. 82, 83, 91, 92, 101 and 102) in accordance with the custom-monitoring schedule approved for the site. Specifically, sulfur content sample analysis shall be conducted twice per calendar year during the first and third quarter of each year. If any sulfur analysis indicates noncompliance with 40 CFR 60.333 the owner or operator shall notify the U.S. EPA Regional Office Air Division of such excess emissions and the custom fuel monitoring schedule shall be conducted weekly during the interim period when this schedule is being re-examined. A change in the fuel supply shall

also cause a review of the custom fuel-monitoring schedule. The permittee shall test the No. 2 distillate oil for sulfur content on each occasion that fuel is transferred (as referenced in Appendix A of 40 CFR 60) to the storage tank, from any other source. Fuel oil sulfur content shall be determined using ASTM D2880 or another approved ASTM method incorporated in 40 CFR 60 by reference. Initial test methods and changes to test methods used by the permittee to determine sulfur content shall be submitted to and approved by the Piedmont Regional Office (PRO) of the DEQ. Records of fuel oil sulfur content shall be available on site for inspection by DEQ personnel. Records associated with the custom fuel-monitoring schedule shall be retained for a period of five (5) years.
(9VAC5-80-110 and Condition 10 of 10/19/2020 Permit)

49. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – The simple cycle combustion turbines (ref. no. 82, 91 and 101) combined shall consume no more than the heat input quantity of 11,662,080.0 MMBtu (HHV) per year (100,000 BTU/100 scf of natural gas), calculated monthly as the sum of each consecutive 12-month period. Each simple cycle combustion turbine (ref. no. 82, 91 and 101) shall consume no more than the heat input quantity of 5,072,100.0 MMBtu (HHV) per year (100,000 BTU/100 scf of natural gas), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. Total heat input from the combustion of natural gas during peak firing in the simple cycle combustion turbine (ref. no. 83, 92 and 102) shall not exceed 256,077.0 mmBTU (HHV) per year (100,000 BTU/100 scf of natural gas), calculated daily as the sum of each consecutive 365 day period. The simple cycle combustion turbine (ref. no. 81) shall consume no more than the heat input quantity from the combustion of No. 2 distillate oil not exceed 611,100.0 mmBTU (HHV) per year (138,000 BTU/gallon), calculated daily as the sum of each consecutive 365 day period. Compliance for the consecutive 365 day period of No. 2 distillate oil used in simple cycle combustion turbine (ref. no. 81) shall be demonstrated daily by adding the total for the most recently completed day to the individual daily totals for the preceding 364 days.
(9VAC5-80-110 and Condition 11 of 10/19/2020 Permit)
50. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Limitations** – Except as specified in this permit the simple cycle combustion turbines (ref. no. 81, 82, 83, 91, 92, 101 and 102) are to be operated in compliance with all applicable requirements of 40 CFR Part 60, Subpart GG – Standards of Performance for Stationary Gas Turbines.
(9VAC5-80-110 and Condition 12 of 10/19/2020 Permit)
51. **Power Production Equipment Requirements - (emission unit ID# 82, 91 and 101) - Limitations** – Short-term emission limits from the normal operation of each of the simple cycle combustion turbines (ref. no. 82, 91 and 101) shall not exceed the limits specified below. The SO₂, PM, PM-10 and PM 2.5 and VOC emission limits of this condition apply at all times including startup and shutdown. The NO_x and CO emission limits of this condition apply at all times except startup and shutdown (as specified in Condition 55) and Tuning (as specified in Condition 56):

Nitrogen Oxides (as NO ₂)	9 ppmvd @ 15% O ₂ (1-hour average)	64.0	lbs/hr
Carbon Monoxide	4 ppmvd @ 15% O ₂ (1-hour average)	14.0	lbs/hr
Particulate Matter (PM) (Filterable only)	5.13 x 10 ⁻³ lb/MMBtu (1-hour average)	9.0	lbs/hr
PM-10 (including condensable PM)	6.86 x 10 ⁻³ lb/MMBtu (1-hour average)	12.0	lbs/hr
PM 2.5 (including condensable PM)	6.86 x 10 ⁻³ lb/MMBtu (1-hour average)	12.0	lbs/hr
Sulfur Dioxide	2.37 x 10 ⁻³ lb/MMBtu (1-hour average)	4.7	lbs/hr
Volatile Organic Compounds	2 ppmvd @ 15 % O ₂ (1-hour average)	3.3	lbs/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits may be determined as stated in Conditions 39, 40, 41, 42, 43, 44, 47, 48, 49, 50, 54, 55, and 56. (9VAC5-80-110 and Condition 13 of 10/19/2020 Permit)

52. **Power Production Equipment Requirements - (emission unit ID# 83, 92 and 102) - Limitations**

– Short-term emission limits from the operation of the simple cycle combustion turbine (ref. no. 83, 92 and 102) while peak fired on natural gas shall not exceed the limits specified below (except during start-up, shutdown and malfunction conditions):

Nitrogen Oxides (as NO ₂)	15 ppmvd @ 15 % O ₂ (1-hour average)	110.0	lbs/hr
Carbon Monoxide		53.5	lbs/hr
Particulate Matter (PM)	5.27 x 10 ⁻³ lb/MMBtu (1-hour average)	9.0	lbs/hr
PM-10	8.79 x 10 ⁻³ lb/MMBtu (1-hour average)	15.0	lbs/hr
PM 2.5	8.79 x 10 ⁻³ lb/MMBtu (1-hour average)	15.0	lbs/hr
Sulfur Dioxide	2.93 x 10 ⁻³ lb/MMBtu	5.0	lbs/hr
Volatile Organic Compounds		5.0	lbs/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits.
 (9VAC5-80-110 and Condition 14 of 10/19/2020 Permit)

53. **Power Production Equipment Requirements - (emission unit ID# 81) - Limitations** – Short-term emission limits from the operation of the simple cycle combustion turbine (ref. no. 81) fired on No. 2 distillate fuel oil shall not exceed the limits specified below (except during start-up, shutdown and malfunction conditions):

Nitrogen Oxides (as NO ₂)	42 ppmvd @ 15 % O ₂ (1-hour average)	343.0 lbs/hr
Carbon Monoxide		97.0 lbs/hr
Particulate Matter (PM)	8.35 x 10 ⁻³ lb/MMBtu (1-hour average)	17.0 lbs/hr
PM-10	2.23 x 10 ⁻² lb/MMBtu (1-hour average)	45.5 lbs/hr
PM 2.5	2.23 x 10 ⁻² lb/MMBtu (1-hour average)	45.5 lbs/hr
Sulfur Dioxide	5.15 x 10 ⁻² lb/MMBtu	105.0 lbs/hr
Volatile Organic Compounds		7.5 lbs/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits.
 (9VAC5-80-110 and Condition 15 of 10/19/2020 Permit)

54. **Power Production Equipment Requirements - (emission unit ID# 81) - Limitations (Start-up and Shutdown)** – The permittee shall comply with the requirements of this permit at all times except as indicated in Condition 53. In conjunction with stack tests and based on the DEQ's Piedmont Regional Office's (PRO) approval, the permittee's definition of start-up and shut down for unit ID# 81 shall be defined as follows:

- a. Startup is the time from flame on plus 1 hour rounded to the next clock hour.
- b. Shutdown is the time the "stop" command is given plus 1 hour rounded to the next clock hour.

The permittee shall operate the facility so as to minimize the frequency and duration of startup and shutdown events. Compliance with § 9 VAC 5-50-20E requires the permittee to have procedures and a training plan in place to minimize the occurrences, magnitude and/or duration of excess emissions.
 (9VAC5-80-110 and Condition 16 of 10/19/2020 Permit)

55. **Power Production Equipment Requirements - (emission unit ID# 82/91/101) - Limitations**

(Start-up and Shutdown) – The permittee shall comply with the requirements of this permit at all times except where noted by a specific condition. For the purpose of this permit, this condition defines startup and shutdown operating scenarios for Simple Cycle Combustion Turbines (ref. no. 82, 91 and 101) as follows:

- a. Startup periods are defined as the time from when “fuel is ignited in the turbine combustor” until the turbine reaches emissions compliance; but in no case greater than 1 hour (i.e. any sixty consecutive minutes). The numerical natural gas emission limits for simple cycle combustion turbines (ref. no. 82, 91 and 101) for NO_x during startup and shutdown applies only to the lb/hr and ppm state limits of NO_x in the permit, but not to the ppm limits set forth in the NSPS 40 CFR 60 Subpart GG.
- b. Shutdown periods are defined as the time from when the “turbine stop” command is given until the flame is extinguished; but in no case greater than 1 hour (i.e. any sixty consecutive minutes).
- c. The permittee shall operate all CEMS during periods of startup and shutdown.
- d. The permittee shall record the time, date and duration of each startup and shutdown event. The records must include calculations of NO_x and CO emissions during each event based on the CEMS data. These records must be kept for five years following the date of such event.
- e. The permittee shall operate the facility so as to minimize the frequency and duration of startup and shutdown events.
- f. During each startup or shutdown event, emissions shall not exceed the following:

Pollutant	Startup/Shutdown Limitations (ref. no. 82, 91 and 101)
NO _x	NG startup event – 69.4 lb/turbine NG shutdown event – 59.2 lb/turbine
CO	NG startup event – 416.6 lb/turbine NG shutdown event – 147.0 lb/turbine

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. The permittee is subject to all requirements of NSPS 40 CFR 60, Subpart GG. The NSPS at §60.334 (j) states that excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction.

(9VAC5-80-110 and Condition 17 of 10/19/2020 Permit)

56. **Alternative Operating Scenario: Turbine Generators - (emission unit ID# 82/91/101) - Tuning**

– The permittee shall comply with the requirements of this permit at all times except where noted by a specific condition. For the purpose of this permit, this condition defines the tuning operating scenario for the Simple Cycle Combustion Turbines (ref. no. 82, 91 and 101):

- a. For the purpose of this permit, tuning is defined as the manipulation of the units and the associated emission controls by a qualified professional to ensure optimized operation and minimized emissions.

- b. No tuning event shall last more than 24 hours.
- c. Annual tuning events shall be limited to 96 hours per CT per 12-month period.
- d. Quarterly online CT tuning events conducted by the OEM are authorized without notice as normal scheduled maintenance.
- e. During each Tuning event, emissions shall not exceed the following:

Pollutant	Tuning Event Limitations
NO _x	1,200.0 lb/turbine/24 hour period
CO	400.0 lb/turbine/24 hour period

- f. The permittee shall notify the Piedmont Regional Air Compliance Manager at the address below, or by email, 24 hours prior to each declared special CT tuning event unless approval for a shorter notice is given by DEQ. The notification shall include, but is not limited to, the following information:
 - i. Identification of the specific CT to be tuned.
 - ii. Reason for the declared special tuning event.
 - iii. Measures that will be taken to minimize the length of the declared special tuning event.

DEQ Regional Air Compliance Manager
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

- g. The permittee shall furnish a written report to the Regional Air Compliance Manager at the address above, including all pertinent facts concerning any declared special tuning event, as soon as practicable but not less than 14 business days after the retuning event. The notification shall include, but is not limited to, the following information:
 - i. Identification of the CT that was tuned.
 - ii. The date and time of commencement and completion of the declared special tuning events.
 - iii. NO_x and CO emissions during the declared special tuning events.
- h. NO_x and CO emissions during CT tuning events shall be recorded and included in the associated quarterly excess emission report if the applicable emission limits are exceeded. Emissions during tuning shall be included in the facility-wide total

(9VAC5-80-110 and Condition 18 of 10/19/2020 Permit)

57. **Power Production Equipment Requirements - Turbine Generators - (emission unit ID# 82/91/101)** - The CO_{2e} emissions shall not exceed 1,361.0 lb/MWhr gross and an annual average efficiency of 11,627.0 Btu/kWh gross (HHV), both calculated each month on a 12 month running average basis from the operation of the three simple cycle gas turbine generators (ref. no. 82, 91 and 101). These limits apply at all times (ref. no. 82, 91 and 101). Compliance shall be determined each month by summing the calculated CO_{2e} emissions

for each of the three simple cycle gas turbine generators (ref. no. 82, 91 and 101) during the previous 12 month operating period and dividing that value by the sum of the electrical energy output over that same period.
(9VAC5-80-110 and Condition 19 of 10/19/2020 Permit)

58. **Process Emission Limits: Electrical Breakers** - Emissions from the operation of the electrical generator breakers (CB-1 through CB-3) shall not exceed the limits specified below:
Generator Breakers CB1-CB3 combined 55.1 tons of CO_{2e}/year (12 month rolling total)
These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with this emission limit may be determined as stated in Condition 45.
(9VAC5-80-110 and Condition 20 of 10/19/2020 Permit)

59. **Power Production Equipment Requirements - (emission unit ID# 81/83/92/102) - Limitations** – Annual emissions from the permittee's Simple Cycle Combustion Turbine Facility shall not exceed the limits specified below:

Nitrogen Oxides (as NO ₂)	59.7 tons/yr (12 month rolling total)
Carbon Monoxide	18.6 tons/yr (12 month rolling total)
Particulate Matter (PM)(Filterable only)	3.3 tons/yr (12 month rolling total)
PM-10 (including condensable PM)	7.9 tons/yr (12 month rolling total)
PM 2.5 (including condensable PM)	7.9 tons/yr (12 month rolling total)
Sulfur Dioxide	16.2 tons/yr (12 month rolling total)
Volatile Organic Compounds	1.6 tons/yr (12 month rolling total)
CO _{2e}	64,984.0 tons/yr (12 month rolling total)

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits.
(9VAC5-80-110 and 256077)

60. **Power Production Equipment Requirements - (emission unit ID# 82/91/101) - Limitations** – Annual emissions from the operation of the turbines on natural gas (ref. no. 82, 91 and 101) combined including tuning, startup and shutdown, malfunction and emergency situations shall not exceed the limits specified below:

Nitrogen Oxides (as NO ₂)	252.1 tons/yr (12 month rolling total)
Carbon Monoxide	255.7 tons/yr (12 month rolling total)
Particulate Matter (PM)(Filterable only)	30.0 tons/yr (12 month rolling total)

Nitrogen Oxides (as NO ₂)	252.1 tons/yr (12 month rolling total)
PM-10 (including condensable PM)	40.0 tons/yr (12 month rolling total)
PM 2.5 (including condensable PM)	40.0 tons/yr (12 month rolling total)
Sulfur Dioxide	13.8 tons/yr (12 month rolling total)
Volatile Organic Compounds	11.0 tons/yr (12 month rolling total)
CO _{2e}	682,797.0 tons/yr (12 month rolling total)

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits may be determined as stated in Conditions 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55 and 56. (9VAC5-80-110 and Condition 22 of 10/19/2020 Permit)

61. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) – Monitoring/Recordkeeping** – The nitrogen oxide emission monitor required by this permit, the continuous monitoring data, and the quality assurance data shall, at the discretion of the Board, be used to determine compliance with the NO_x emission limits and/or relevant emission standards. Each monitor is subject to such data capture requirements and/or quality assurance requirements as specified in this permit and as may be deemed appropriate by the Board (40 CFR 75).
 (9VAC5-80-110 and Condition 23 of 10/19/2020 Permit)
62. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) – Monitoring/Recordkeeping** – The simple cycle combustion turbines (ref. no. 82, 83, 91, 92, 101 and 102) shall operate at Mode 6, or emissions compliance when firing natural gas, except during tuning, startup, shutdown, malfunction and emergency situations. The simple cycle combustion turbine (ref. no. 81) shall not operate at less than conditions corresponding to 50 percent simple cycle combustion turbine design maximum load corrected to ambient conditions, except during start-up, shut down, malfunction and emergency situations.
 (9VAC5-80-110 and Condition 24 of 10/19/2020 Permit)
63. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Monitoring** – Continuous emission monitoring (CEM) systems shall be installed on the simple cycle combustion turbines (ref. no. 81, 82, 83, 91, 92, 101 and 102) exhaust stacks to measure and record the concentration of nitrogen oxides (measured as NO_x) and carbon monoxide (CO) emitted from the simple cycle combustion turbines exhaust stacks in ppmvd, corrected to 15% O₂. Each nitrogen oxide and carbon monoxide emissions monitor shall be collocated with an O₂ monitor. CEMS for NO_x shall meet the design specifications of 40 CFR Part 75; whereas CEMS for CO shall be installed, evaluated, and operated according to the monitoring requirements in 40 CFR 60.13.
 - a. The NO_x CEM monitors shall be located, maintained, and calibrated in accordance with performance specifications and test procedures identified in 40 CFR 75. The quality assurance of data generated by the NO_x CEMS shall be demonstrated by

implementing or exceeding the minimum requirements for NO_x CEM quality assurance as defined in 40 CFR 75.

- b. The continuous monitoring systems shall be installed and operational prior to conducting initial performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation and calibration of the device. The Piedmont Regional Office (PRO) of the DEQ shall be notified in writing at least (30) days prior to the demonstration of the continuous monitoring system performance evaluations. Subsequent similar notification requirements are to be submitted to the Piedmont Regional Office (PRO) of the DEQ.

(9VAC5-80-110 and Condition 25 of 10/19/2020 Permit)

64. **Power Production Equipment Requirements - (emission unit ID# 82/91/101) - Monitoring** – The facility shall measure heat input and power output on natural gas (ref. no. 82, 91 and 101). This data shall be used to calculate 12 month running total basis CO₂ emissions in lb/MW hr gross and BTU/ kW hr gross, each completed monthly as the sum of each 12 month running total basis. An alternative method, as allowed by Appendix G to 40 CFR 75, may be used to calculate CO₂ emissions to report annual emissions.
 (9VAC5-80-110 and Condition 26 of 10/19/2020 Permit)

65. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Monitoring** – The nitrogen oxides CEMS required by this permit shall meet a minimum data capture of 95 percent of the simple cycle combustion turbine (ref. no. 81, 82, 83, 91, 92, 101 and 102) facility operating hours, calculated quarterly as the sum of each consecutive four quarters. The CEM availability shall be calculated as follows:

$$A^* = \frac{\sum Hc}{\sum Ho} \times 100$$

Where:

A* is the percent of time that the CEM was available,

Hc is the number of hours the CEM collected valid data and

Ho is the number of hours that the combined cycle combustion turbine operated.

* The hours of valid data and the operating hours shall be summed over the most recent four quarters.

The NO_x emissions shall be less than or equal to the calculated allowable limit 95% of the time (excluding periods of start-up, shut down and malfunction). The tuning, startup and shutdown NO_x emissions are limited in Conditions 55 and 56. The percent of the time that emissions are less than or equal to allowable limits shall be calculated as follows:

$$C^* = \left(1 - \frac{\sum He}{\sum Hv} \right) \times 100$$

Where:

C is the percent of time that emissions are less than or equal to allowable limits,

H_e is the number of hours that emissions are greater than allowable limits, and

H_v is the number of hours that the CEM was collecting valid data.

* The number of hours that emissions are greater than allowable limits and the hours of valid data shall be summed over the most recent four quarters.

(9VAC5-80-110 and Condition 28 of 10/19/2020Permit)

66. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) - Monitoring** – In the event of a nitrogen oxide CEM failure, the permittee must either:

- a. Use the maximum allowable hourly NO_x emission rate, for each hour of operation where CEM data is not available. This data shall be included in the rolling 12 month emission summation; or
- b. Estimate emissions as stated in 40 CFR 75 Subpart D.

(9VAC5-80-110 and Condition 29 of 10/19/2020Permit)

67. **Power Production Equipment Requirements - (emission unit ID# 81/82/83/91/92/101/102) – Monitoring/Recordkeeping** – Visible emissions from the simple cycle combustion turbines (ref. no. 81, 82, 83, 91, 92, 101 and 102) exhaust stack shall not exceed ten (10) percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed twenty (20) percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during tuning, startup, shutdown (as defined in Conditions 55 and 56), and malfunction.
(9VAC5-80-110 and Condition 30 of 10/19/2020Permit)

68. **On Site Records: Turbine Generators** - emission unit ID# 81/82/83/91/92/101/102): The permittee shall maintain records of all emission data, fuel throughputs (heat input consumption based on fuel) and operating parameters required to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office (PRO) of the DEQ.

- a. Monthly and annual throughput of natural gas to the three simple cycle combustion turbines (ref. no. 82, 91 and 101), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months;
- b. Daily and annual throughput of natural gas while peak firing based on higher heating value (HHV) to the simple cycle combustion turbines (ref. no. 83, 92 and 102), calculated daily as the sum of each consecutive 365 day period.;
- c. Daily and annual throughput of No. 2 distillate fuel oil to the simple cycle combustion turbines (ref. no. 81), calculated daily as the sum of each consecutive 365 day period;

- d. Fuel quality records for natural gas combusted in the simple cycle combustion turbines (ref. no. 82, 83, 91, 92, 101 and 102) and Fuel quality test records for No. 2 distillate fuel oil combusted in the simple cycle combustion turbines (ref. no. 81);
- e. Continuous monitoring system emissions data, calibrations and calibration checks, percent operating time, and excess emissions;
- f. The occurrence and duration of any startup, shutdown, or malfunction of the affected simple cycle combustion turbines (ref. no. 81, 82, 83, 91, 92, 101 and 102) facility, any malfunction of the air pollution control equipment, or any periods during which a continuous emission monitoring system is inoperative;
- g. Scheduled and unscheduled maintenance and operator training.
- h. Results of all stack tests, simple cycle combustion turbines heat rate tests, power production by combustion turbine and fuel type or operating scenario, visible emission evaluations, and performance evaluations.
- i. Manufacturer's instructions for proper operation of equipment.
- j. Records showing the generator breakers are operating in accordance with the manufacturer's specifications.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9VAC5-80-110 and Condition 31 of 10/19/2020Permit)

69. **Reports: Turbine Generators - (emission unit ID# 81/82/83/91/92/101/102):** The permittee shall submit quarterly excess emission reports to the Piedmont Regional Office (PRO) of the DEQ within 30 days after the end of each calendar quarter or semi-annually as needed. Details of the quarterly reports are to be arranged with the Piedmont Regional Office (PRO). Each quarterly report shall cover, at a minimum, the dates included in the calendar quarter and provide the following information for each day in the quarter, report each one (1) hour block in which a nitrogen oxides and/or carbon monoxide permit limit is exceeded, copy of the written notification and corrective action taken. The report shall include the following for each excess emission of nitrogen oxides (NOx) and/or carbon monoxide (CO): start time, duration, equipment involved, actual NOx and/or CO emissions in ppmvd @ 15% O₂, fuel type and consumption rate in BTUs, and the three simple cycle combustion turbines (ref. no. 81, 82, 83, 91, 92, 101 and 102) load. If, during the calendar quarter, there are no times when a nitrogen oxides and/or carbon monoxide permit limit is exceeded, the permittee shall state in the quarterly report that no such events occurred during the affected calendar quarter. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and when no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in that report.
(9VAC5-80-110 and Condition 32 of 10/19/2020Permit)

70. **Emissions Testing: Turbine Generators - (emission unit ID# 81/82/83/91/92/101/102):** The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from excessive cyclonic flow as defined in 40 CFR 60 Appendix A. Sampling ports shall be provided at the appropriate locations (in accordance with the applicable performance specification in 40 CFR Part 60, Appendix B) and safe sampling platforms and access shall be provided. (9VAC5-80-110 and Condition 33 of 10/19/2020Permit)
71. **Emissions Testing: Turbine Generators - (emission unit ID#s 91 and 101):** The testing shall be performed, reported and demonstrate compliance within 90 days after achieving the maximum production rate at which the simple cycle combustion turbines (ref. no. 91 and 101) facility will be operated, but in no event later than 18 months after start-up of the permitted facility, stack emission tests for nitrogen oxides (NO_x), Carbon Monoxide (CO), PM, PM₁₀ and PM_{2.5} shall be conducted when only natural gas is being fired, to determine compliance with the emission limits contained in Conditions 51 and 60. Tests shall be conducted at between 90 and 100% load, reported, and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The permittee shall provide the appropriate test data performed for all other guaranteed emission by the turbine manufacturer. The details of the tests not included in the test protocol, are to be presented to the Piedmont Regional Office (PRO) of the DEQ for review and concurrence. The permittee shall submit a test protocol at least thirty (30) days prior to testing. CT-1 initial performance test has been completed and approved. (9VAC5-80-110 and Condition 34 of 10/19/2020Permit)
72. **Visible Emissions Evaluation: Turbine Generators - (emission unit ID#s 91 and 101):** Concurrent with the initial performance tests, but no later than the time limit specified in this permit, Visible Emission Evaluations (VEE) in accordance with 40 CFR, Part 60, Appendix A, Method 9, shall also be conducted on the simple cycle combustion turbines (ref. no. 91 and 101), when only natural gas is being fired. Each test shall consist of thirty (30) sets of twenty-four (24) consecutive observations (at fifteen second intervals) to yield a six (6) minute average. The details of the tests are to be arranged with the Piedmont Regional Office (PRO) of the DEQ. The permittee shall submit a test protocol at least thirty (30) days prior to testing. Should conditions prevent concurrent opacity observations, the Piedmont Regional Office (PRO) of the DEQ shall be notified in writing, within seven (7) days, and visible emissions testing shall be rescheduled within thirty (30) days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. Two copies of the test results shall be submitted to the Piedmont Regional Office (PRO) of the DEQ within 45 days after test completion and shall conform to the test report format enclosed with this permit. If the permittee's VEE results do not show compliance with the standards set in Condition 67, the permittee will be required to stack test for PM. (9VAC5-80-110 and Condition 35 of 10/19/2020Permit)
73. **Testing: Turbine Generators Heat Rate Limit - (emission unit ID#s 82, 91 and 101):** Initial compliance testing, using ASME Performance Test Code on Overall Plant Performance (ASME PTC 46-1996 or ASME PTC 22) or equivalent method approved by the Piedmont Regional Office, shall be conducted to show compliance with the normal operation heat

rate limit contained in Condition 57 (both calculated each month on a 12 month running average basis). The testing shall be performed, reported and demonstrate compliance *after* achieving the maximum production rate at which the three simple cycle combustion turbines (ref. no. 82, 91 and 101) facility will be operated, but in no event later than 18 months after issuance of this permit. Testing shall be conducted when combusting natural gas at 100% load. The details of the tests are to be arranged with the Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Piedmont Regional Office within 45 days of test completion and shall conform to the test report format enclosed with this permit. An exceedance of the heat rate limit is not considered a violation of this permit, but triggers a requirement for the permittee to submit a maintenance plan to DEQ which specifies the actions the permittee plans to take in order to achieve the heat rate limit contained in Condition 57. The details of this plan are to be arranged with the Piedmont Regional Office.

(9VAC5-80-110 and Condition 36 of 10/19/2020Permit)

74. **Stack Tests: Turbine Generators Continuing Compliance - (emission unit ID#s 81/82/83/91/92/101 and 102):** Upon request by DEQ, the permittee shall conduct additional performance tests to determine compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Piedmont Regional Office. (9VAC5-80-110 and Condition 37 of 10/19/2020Permit)
75. **Emissions Testing: Turbine Generators - (emission unit ID#s 82, 91 and 101):** Every five years after the initial compliance performance stack tests the permittee shall conduct stack testing for PM, PM10 and PM2.5 for the three simple cycle combustion turbines (ref. no. 82, 91 and 101) when only natural gas is being fired, to determine continuing compliance with the emission limits contained in Conditions 51 and 60. Tests shall be conducted at between 90 and 100% load, reported, and data reduced as set forth in 9 VAC 5-50-30 and 9 VAC 5-60-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410 and 9 VAC 5-60-70. The permittee shall provide the appropriate test data performed for all other guaranteed emission by the turbine manufacturer. The details of the tests not included in the test protocol, are to be presented to the Piedmont Regional Office (PRO) of the DEQ for review and concurrence. The permittee shall submit a test protocol at least thirty (30) days prior to testing. (9VAC5-80-110 and Condition 38 of 10/19/2020Permit)
76. **Visible Emissions Evaluation: Turbine Generators - (emission unit ID#s 82, 91 and 101):** Concurrent with the continuing compliance performance tests, but no later than the time limit specified in this permit, Visible Emission Evaluations (VEE) in accordance with 40 CFR, Part 60, Appendix A, Method 9, shall also be conducted on the three simple cycle combustion turbines (ref. no. 82, 91 and 101), when only natural gas is being fired. Each test shall consist of thirty (30) sets of twenty-four (24) consecutive observations (at fifteen second intervals) to yield a six (6) minute average. The details of the tests are to be arranged with the Piedmont Regional Office (PRO) of the DEQ. The permittee shall submit a test protocol at least thirty (30) days prior to testing. Should conditions prevent concurrent opacity observations, the Piedmont Regional Office (PRO) of the DEQ shall be notified in writing, within seven (7) days, and visible emissions testing shall be rescheduled within thirty (30) days. Rescheduled testing shall be conducted under the same conditions (as possible) as the performance tests. Two copies of the test results shall be submitted to

the Piedmont Regional Office (PRO) of the DEQ within 45 days after test completion and shall conform to the test report format enclosed with this permit.

Note: Test report format not included in this permit.

(9VAC5-80-110 and Condition 39 of 10/19/2020Permit)

77. **Initial Notifications: Turbine Generators - (emission unit ID#s 91 and 101):** The permittee shall furnish written notification to the Piedmont Regional Office of:
- a. The actual date on which construction of the simple cycle combustion turbines (ref. no. 91 and 101) facility commenced within 30 days after such date.
 - b. The anticipated start-up date of the simple cycle combustion turbines (ref. no. 91 and 101) facility postmarked not more than 60 days nor less than 30 days prior to such date.
 - c. The actual start-up date of the electric power generation facility within 15 days after such date.
 - d. The anticipated date of the simple cycle combustion turbines (ref. no. 91 and 101) facility continuous monitoring system performance evaluations postmarked not less than 30 days prior to such date.
 - e. The anticipated date of performance tests of the simple cycle combustion turbines (ref. no. 91 and 101) facility, postmarked at least 30 days prior to such date.

Copies of the written notification referenced in items a through e above are to be sent to:

Chief, Air Section
Enforcement and Compliance Assurance Division
Air, RCRA and Toxics Branch
U.S. Environmental Protection Agency, Region 3
1650 Arch Street - 3ED21
Philadelphia, PA 19103

(9VAC5-80-110 and Condition 40 of 10/19/2020Permit)

Facility Wide Conditions

78. **Facility Wide Conditions - Testing** - The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9VAC5-80-110)
79. **Facility Wide Conditions - Testing** - If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9VAC5-80-110)

Insignificant Emission Units

80. **Insignificant Emission Units** - The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (9 VAC 5-80-720C)
5	132 MW Steam Turbine	9 VAC 5-80-720 B.	None	-----
6	132 MW Steam Turbine	9 VAC 5-80-720 B.	None	-----
1	Ammonia Storage	9 VAC 5-80-720 B.	Ammonia	10,000 gal. each
2	Ammonia Storage	9 VAC 5-80-720 B.	Ammonia	10,000 gal. each
WT	Water Treatment Facility	9 VAC 5-80-720 A. 43	N/A	N/A

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Permit Shield & Inapplicable Requirements

81. **Permit Shield & Inapplicable Requirements** - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 60.42Da	Standards of performance for electric utility steam generating units – Standards for particulate matter (PM)	The duct burners meet the exemption in 40 CFR 60.42Da(f)(1).
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	Indirect measure of NO _x (water to fuel ratio) replaced with direct measure.
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	Exempt from testing for nitrogen content in natural gas because no allowance is provided for nitrogen in the fuel when natural gas is fired.
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	Modified schedule for sampling sulfur in natural gas.
40 CFR 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.	40 CFR 60 Subpart Kb is not applicable as per 40 CFR 60.110b (b) to the two fuel oil storage tanks each with a capacity of 7.6 million gals and each with a maximum true vapor pressure less than 3.5 kilopascals.
40 CFR 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	Turbines have not been installed or modified after February 18, 2005.
40 CFR 60 Subpart TTTT	Standards of Performance For Greenhouse Gas Emissions For Electric Generating Units	This subpart applies to any steam generating unit, IGCC, or stationary combustion turbine that commenced construction after January 8, 2014. All of the turbines and steam generating units were constructed prior to this date.
40 CFR 63, Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units	The duct burners are not considered oil-fired units as the quantity of oil fired does not exceed 15% in any calendar year or an average of 10% over 3 calendar years.

Citation	Title of Citation	Description of Applicability
40 CFR 63 Subpart YYYY	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	DLP is a major source of HAPs. This Subpart does not apply to the combustion turbines since they are considered existing units and are exempt pursuant to 40 CFR 63.6090(b)(4).
40 CFR 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	The emergency generator is considered existing as it was constructed prior to December 19, 2002. In addition, the unit meets the definition of emergency as it is operated to provide electrical power during an emergency situation. The unit is not used for peak shaving. As an existing emergency unit, the emergency generator meets the exemption in §63.6590(b)(3)(iii).

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-500)

General Conditions

82. **General Conditions - Federal Enforceability** -All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9VAC 5-80-110 N)
83. **General Conditions - Permit Expiration**- This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
84. **General Conditions - Permit Expiration**-The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
(9VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
85. **General Conditions - Permit Expiration**-If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
(9VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

86. **General Conditions - Permit Expiration**-No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
(9VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
87. **General Conditions - Permit Expiration**-If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
(9VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
88. **General Conditions - Permit Expiration**-The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.
(9VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
89. **General Conditions -Recordkeeping and Reporting** - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
- a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses.
 - f. The operating conditions existing at the time of sampling or measurement.
- (9 VAC 5-80-110 F)
90. **General Conditions -Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9VAC 5-80-110 F)
91. **General Conditions -Recordkeeping and Reporting** - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and

September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
- b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:
 - 1) Exceedance of emissions limitations or operational restrictions;
 - 2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,
 - 3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.
- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-110 F)

92. **General Conditions - Annual Compliance Certification** - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to § 114(a)(3) and § 504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the certification. The time period to be addressed is January 1 to December 31.
- b. The identification of each term or condition of the permit that is the basis of the certification.
- c. The compliance status.
- d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
- e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
- f. Such other facts as the permit may require to determine the compliance status of the source.

- g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD Permits@epa.gov

(9 VAC 5-80-110 K.5)

93. **General Conditions - Permit Deviation Reporting** - The permittee shall notify the Director, Piedmont Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 45 of this permit. (9VAC 5-80-110 F.2 and 9 VAC 5-80-250)
94. **General Conditions - Failure/Malfunction Reporting** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Piedmont Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Piedmont Regional Office. (9VAC 5-20-180 C)
95. **General Conditions - Severability** - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit. (9 VAC 5-80-110 G.1)
96. **General Conditions - Duty to Comply** - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application. (9 VAC 5-80-110 G.2)
97. **General Conditions - Need to Halt or Reduce Activity not a Defense** - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (9 VAC 5-80-110 G.3)

98. **General Conditions - Permit Modification** - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-190 and 9 VAC 5-80-260)
99. **General Conditions - Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)
100. **General Conditions - Duty to Submit Information** - The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)
101. **General Conditions - Duty to Submit Information** - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)
102. **General Conditions - Duty to Pay Permit Fees** - The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350 in addition to an annual permit maintenance fee consistent with the requirements of 9 VAC 5-80-2310 through 9 VAC 5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9 VAC 5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9 VAC 5-80-110 H, 9 VAC 5-80-340 C and 9 VAC 5-80-2340 B)
103. **General Conditions - Fugitive Dust Emission Standards** - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:
- a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

- b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
- c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;
- d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
- e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-50-90)

104. **General Conditions - Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E)

105. **General Conditions - Alternative Operating Scenarios** - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.

(9 VAC 5-80-110 J)

106. **General Conditions - Inspection and Entry Requirements** - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

- a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

107. **General Conditions - Reopening For Cause** - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F. The conditions for reopening a permit are as follows:
- a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
 - c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.
- (9 VAC 5-80-110 L)
108. **General Conditions - Permit Availability** - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)
109. **General Conditions - Transfer of Permits** - No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
110. **General Conditions - Transfer of Permits** - In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
111. **General Conditions - Transfer of Permits** - In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
112. **General Conditions - Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-110, 9 VAC 5-80-190 C and 9 VAC 5-80-260)

113. **General Conditions - Duty to Supplement or Correct Application** - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-110 and 9 VAC 5-80-80 E)
114. **General Conditions - Stratospheric Ozone Protection** - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9 VAC 5-80-110 and 40 CFR Part 82)
115. **General Conditions - Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-110)
116. **General Conditions - Accidental Release Prevention** - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(9 VAC 5-80-110 and 40 CFR Part 68)
117. **General Conditions - Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110)
118. **General Conditions - Emissions Trading** - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:
- a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
 - b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
 - c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110)

Title IV (Phase II Acid Rain) Permit Allowances and Requirements (EU# 501,502, 503, 504, 81, 82, 83, 91, 92, 101 and 102)

119. Title IV (Phase II Acid Rain) SO₂ Allowance Allocations and NO_x Requirements

		2021	2022	2023	2024	2025
501, 502, 601, 602, CT1, CT2 and CT3	SO ₂ allowances, allocated by U.S. EPA. (tons)	None. ¹	None. ¹	None. ¹	None. ¹	None. ¹
	NO _x limit	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable.

(9 VAC 5-80-490 A.4)

EU# 501, 502, 601, 602, CT-1, CT-2 and CT-3 were not eligible for SO₂ allowance allocations by the U.S. EPA under Section 405 of the Clean Air Act and the Acid Rain Program, no allocations were assigned in 40 CFR Part 73, Table 2.

120. Title IV (Phase II Acid Rain) SO₂ Allowance Allocations and NO_x Requirements (EU# 501,502, 601, 602, CT1, CT2, CT3) – Notes:

- a. SO₂ allowances may be acquired from other sources in addition to those allocated by U.S. EPA. No revision to this permit is necessary in order for the owners and operators of this unit to hold additional allowances recorded in accordance with 40 CFR Part 73. The owners and operators of this unit remain obligated to hold sufficient allowances to account for SO₂ emissions from this unit in accordance with 40 CFR 72.9(c)(1).
 (9 VAC 5-80-420 C.1 and H.1 and 9 VAC 5-80-490 O)

- b. This unit was not eligible for SO₂ allowance allocation by U.S. EPA under Section 405 of the Clean Air Act and Acid Rain Program, so none were assigned in 40 CFR Part 73, Table 2.
 (9 VAC 5-80-420 C.6)

121. Title IV (Phase II Acid Rain) SO₂ Allowance Allocations and NO_x Requirements (EU# 501,502, 601, 602, CT1, CT2 and CT3) – Justifications:

- a. CT 1 is a gas-fired or oil-fired simple cycle combustion turbine and is not subject to NO_x limitations under 40 CFR Part 76. CT 2 and CT 3 are gas-fired only simple cycle combustion turbines and are not subject to NO_x limitations under 40 CFR Part 76.
 (9 VAC 5-80-420 D)
- b. Doswell Limited Partnership has obtained a PSD permit to construct and operate a combustion turbine (CT 1, CT2 and CT 3) at their Hanover County facility. The PSD permit for CT 1 was originally issued on April 7, 2000 last amended on October 19, 2020. The PSD permit for CT 2 and CT 3 was originally issued on October 4, 2016 and revised October 19, 2020.
- c. This acid rain permit applies to the combustion turbine CT1, new combustion turbines CT 2 and CT 3, and as of May 5, 2017 the four combustion turbines each equipped with a duct burner (501, 502, 601, and 602). The turbines and duct burners fire natural gas, or a low liquid sulfur petroleum product to make electricity.

A PSD permit was originally issued to the facility on May 4, 1990 last amended on October 4, 2016 and revised October 19, 2020. Although the combined cycle facility was originally exempt from the acid rain program because it had a qualifying power purchase agreement (see 40 CFR 72.6(b)(6)(i) and (ii)), the qualifying agreement has expired so the combined cycle facility is also required to comply with the acid rain regulations. .
(9 VAC 5-80-420 D.)

122. **Phase II Acid Rain Program - Statutory and Regulatory Authorities** - In accordance with the Air Pollution Control Law of Virginia §10.1-1308 and §10.1-1322, the Environmental Protection Agency (EPA) Final Full Approval of the Operating Permits Program (Titles IV and V) published in the Federal Register December 4, 2001, Volume 66, Number 233, Rules and Regulations, Pages 62961-62967 and effective November 30, 2001, and Title 40, the Code of Federal Regulations §§72.1 through 76.16, the Commonwealth of Virginia Department of Environmental Quality (DEQ) issues this permit pursuant to 9VAC5 Chapter 80, Article 3 of the Virginia Regulations for the Control and Abatement of Air Pollution (Federal Operating Permit Article 3).

- a. The designated representative of each affected source and each affected unit at the source shall:
 - i. Submit a complete Acid Rain Permit application and acid rain compliance plan under 40 CFR Part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
 - ii. Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit.
 - b. The owners and operators of each affected source and each affected unit at the source shall:
 - i. Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
 - ii. Have an Acid Rain Permit.
- (9VAC5-80-420, 9VAC5-80-430 C.5, 9VAC5-80-490 and 40 CFR Part 72.9(a))

123. **Phase II Acid Rain Program - Monitoring Requirements**

- a. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75.
 - b. The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
 - c. The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the federal Clean Air Act and other provisions of the operating permit for the source.
- (9VAC5-80-490 and 40 CFR 72.9(b))

124. **Phase II Acid Rain Program – Sulfur Dioxide Requirements(EU# 501,502, 601, 602, CT1, CT2 and CT3)**

- a. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the federal Clean Air Act.
- b. An affected unit shall be subject to the requirements under 9VAC5-80-420 C.1.as follows:
 - i. Starting January 1, 1995, an affected unit under 9VAC5-80-380 A.2.; or
 - ii. Starting on the later of January 1, 1995, in accordance with 40 CFR 72.41 and 72.43, an affected unit under 40 CFR 72.6(a)(2) or (3) that is a substitution or compensating unit; or
 - iii. Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2) that is not a substitution or compensating unit; or
 - iv. Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an affected unit under 9VAC5-80-380 A.3. that is not a substitution or compensating unit.
- c. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- d. An allowance shall not be deducted in order to comply with the sulfur dioxide requirements of 40 CFR 72.9(c)(1)(i) prior to the calendar year for which the allowance was allocated.
- e. An allowance allocated by the EPA Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- f. An allowance allocated by the EPA Administrator under the Acid Rain Program does not constitute a property right.

(9VAC5-80-420, 9VAC5-80-490 and 40 CFR 72.9(c))

125. **Phase II Acid Rain Program - Excess Emissions Requirements**

- a. The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
- b. The owners and operators of an affected source that has excess emissions in any calendar year shall:
 - i. Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and
 - ii. Comply with the terms of an approved offset plan, as required by 40 CFR Part 77.

(9VAC5-80-420, 9VAC5-80-490 and 40 CFR 72.9(e))

126. Phase II Acid Rain Program - Recordkeeping and Reporting Requirements

- a. Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
 - i. The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
 - ii. All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
 - iii. Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - iv. Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- b. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72 Subpart I and 40 CFR Part 75.

(9VAC5-80-420, 9VAC5-80-490 and 40 CFR 72.9(f))

127. Phase II Acid Rain Program - Liability

- a. Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 9VAC5-80-390 or 9VAC5-80-400 and 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the federal Clean Air Act and by the board pursuant to §§ 10.1-1316 and 10.1-1320 of the Code of Virginia.
- b. Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the federal Clean Air Act and 18 U.S.C. 1001 and by the board pursuant to §§ 10.1-1316 and 10.1-1320 of the Code of Virginia.
- c. No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- d. Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

- e. Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- f. Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- g. Each violation of a provision of the Acid Rain Program regulations (40 CFR Parts 72, 73, 74, 75, 76, 77, and 78) by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the federal Clean Air Act.

(9VAC5-80-420, 9VAC5-80-490 and 40 CFR 72.9(g))

128. **Phase II Acid Rain Program - Effect on Other Authorities** - No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 9VAC5-80-390 or 9VAC5-80-400 and 40 CFR 72.7 or 72.8 shall be construed as:

- a. Except as expressly provided in Title IV of the federal Clean Air Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the federal Clean Air Act, including the provisions of title I of the federal Clean Air Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- b. Limiting the number of allowances a source can hold; *provided*, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the federal Clean Air Act;
- c. Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- d. Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- e. Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

(9VAC5-80-420, 9VAC5-80-490 and 40 CFR 72.9(h))

CSAPR Requirements (EU# 501, 502, 601, 602, CT1, CT2 and CT3)

Cross State Air Pollution Rule (CSAPR)

The CSAPR subject units (EU# 501, 502, 601, 602, CT1, CT2 and CT3), and the unit-specific monitoring provisions at this source are identified in the following table. These units are

subject to the requirements for the CSAPR NO_x Annual Trading Program, CSAPR SO₂ Group 1 Trading Program, and CSAPR NO_x Ozone Season Group 2 Trading Program.

Unit ID: Unit 501, Unit 502, Unit 601 Unit 602, Unit CT1, Unit CT2 and Unit CT3

Parameter	Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR Part 75, Subpart B (for SO ₂ monitoring) and 40 CFR Part 75, Subpart H (for NO _x monitoring)	Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR Part 75, appendix D
SO ₂		X
NO _x	X	
Heat input	X	

(9VAC5-80-490 and 40 CFR 97)

129. **CSAPR** – The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 (TR NO_x Annual Trading Program), 97.830 through 97.835 (CSAPR NO_x Ozone Season Group 2 Trading Program), and 97.630 through 97.635 (TR SO₂ Group 1 Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading programs.
 (9VAC5-80-490 and 40 CFR 97)
130. **CSAPR** - Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at <https://www.epa.gov/airmarkets/monitoring-plans-part-75-sources> .
 (9VAC5-80-490 and 40 CFR 97)
131. **CSAPR** - Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR Part 75, Subpart E and 40 CFR 75.66 and 40 CFR 97.435 (TR NO_x Annual Trading Program), 40 CFR 97.835 (TR NO_x Ozone Season Group 2 Trading Program), and/or 40 CFR 97.635 (TR SO₂ Group 1 Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at <https://www.epa.gov/airmarkets/part-75-petition-responses>.
 (9VAC5-80-490 and 40 CFR 97)
132. **CSAPR** – Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR [Insert “97.430 through 97.434” (CSAPR NO_x Annual Trading Program), “97.530 through 97.534” (CSAPR NO_x Ozone Season 1 Trading Program), and/or “97.630 through 97.634” (CSAPR SO₂ Group 1 Trading Program), and/or “97.830 through 97.834” (CSAPR NO_x Ozone Season Group 2 Trading Program), as applicable] must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and [Insert “97.435” (CSAPR NO_x Annual Trading Program), “97.535” (CSAPR NO_x Ozone Season Trading Program), and/or “97.835” (CSAPR NO_x Ozone Season Group 2 Trading Program), as applicable]. The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on EPA's website at <https://www.epa.gov/airmarkets/part-75-petition-responses>.
 (9VAC5-80-490 and 40 CFR 97)

133. **CSAPR** – The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR [Insert “97.430 through 97.434” (CSAPR NO_x Annual Trading Program), “97.530 through 97.534” (CSAPR NO_x Ozone Season Group 1 Trading Program), “97.630 through 97.634” (CSAPR SO₂ Group 1 Trading Program), and/or “97.830 through 97.834” (CSAPR NO_x Ozone Season Group 2 Trading Program), as applicable], and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add to or change this unit's monitoring system description.
(9VAC5-80-490 and 40 CFR 97)

CSAPR NO_x Annual Trading Program Requirements (40 CFR 97.406)

134. **CSAPR** – NO_x Annual Trading Program – The following conditions must be adhered to for emission units (EU# 501,502, 601, 602, CT1, CT2 and CT3), which are subject to the CSAPR NO_x Annual Trading Program.
- a. Designated Representative – The owners and operators shall comply with requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.
 - b. Emissions monitoring, reporting, and recordkeeping requirements.
 - (1) The owners and operators, and the designated representative, of each CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
 - (2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of CSAPR NO_x Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the CSAPR NO_x Annual emissions limitation and assurance provisions under paragraph I.A.123.c below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.
 - c. NO_x emissions requirements.
 - (1) CSAPR NO_x Annual emissions limitation.

- (a) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall hold, in the source's compliance account, CSAPR NO_x Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NO_x emissions for such control period from all CSAPR NO_x Annual units at the source.
 - (b) If total NO_x emissions during a control period in a given year from the CSAPR NO_x Annual units at a CSAPR NO_x Annual source are in excess of the CSAPR NO_x Annual emissions limitation set forth in paragraph I.A.123.c(1)(a) above, then:
 - (i) The owners and operators of the source and each CSAPR NO_x Annual unit at the source shall hold the CSAPR NO_x Annual allowances required for deduction under 40 CFR 97.424(d); and
 - (ii) The owners and operators of the source and each CSAPR NO_x Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.
- (2) CSAPR NO_x Annual assurance provisions.
- (a) If total NO_x emissions during a control period in a given year from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_x emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_x Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying—
 - (i) The quotient of the amount by which the common designated representative's share of such NO_x emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO_x emissions exceeds the respective common designated representative's assurance level; and

- (ii) The amount by which total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state for such control period exceed the state assurance level.
 - (b) The owners and operators shall hold the CSAPR NO_x Annual allowances required under paragraph I.A.123.c(2)(a) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
 - (c) Total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state during a control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the state NO_x Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).
 - (d) It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO_x emissions from the CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state during a control period exceeds the common designated representative's assurance level.
 - (e) To the extent the owners and operators fail to hold CSAPR NO_x Annual allowances for a control period in a given year in accordance with paragraphs I.A.123.c(2)(a) through I.A.123.c(2)(c) above,
 - (i) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
 - (ii) Each CSAPR NO_x Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs I.A.123.c(2)(a) through I.A.123.c(2)(c) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.
- (3) Compliance periods.
- (a) A CSAPR NO_x Annual unit shall be subject to the requirements under paragraph I.A.123.c above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.
 - (b) A CSAPR NO_x Annual unit shall be subject to the requirements under paragraph I.A.123.c(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

- (4) Vintage of allowances held for compliance.
 - (a) A CSAPR NO_x Annual allowance held for compliance with the requirements under paragraph I.A.123.c(1)(a) above for a control period in a given year must be a CSAPR NO_x Annual allowance that was allocated for such control period or a control period in a prior year.
 - (b) A CSAPR NO_x Annual allowance held for compliance with the requirements under paragraph I.A.123.c(1)(b)(i) and I.A.123.c(2)(a) through I.A.123.c(2)(c) above for a control period in a given year must be a CSAPR NO_x Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
 - (5) Allowance Management System requirements. Each CSAPR NO_x Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.
 - (6) Limited authorization. A CSAPR NO_x Annual allowance is a limited authorization to emit one ton of NO_x during the control period in one year. Such authorization is limited in its use and duration as follows:
 - (a) Such authorization shall only be used in accordance with the CSAPR NO_x Annual Trading Program; and
 - (b) Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
 - (7) Property right. A CSAPR NO_x Annual allowance does not constitute a property right.
- d. Title V permit revision requirements.
- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_x Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.
 - (2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the monitoring descriptions in the **Error! Reference source not found.** table above, for units 501,502, 601, 602, CT1, CT2 and CT3, may be added to or changed in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B).

- e. Additional recordkeeping and reporting requirements.
 - (1) Unless otherwise provided, the owners and operators of each CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
 - (a) The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each CSAPR NO_x Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.
 - (b) All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.
 - (c) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_x Annual Trading Program.
 - (2) The designated representative of a CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall make all submissions required under the CSAPR NO_x Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR parts 70.
- f. Liability.
 - (1) Any provision of the CSAPR NO_x Annual Trading Program that applies to a CSAPR NO_x Annual source or the designated representative of a CSAPR NO_x Annual source shall also apply to the owners and operators of such source and of the CSAPR NO_x Annual units at the source.
 - (2) Any provision of the CSAPR NO_x Annual Trading Program that applies to a CSAPR NO_x Annual unit or the designated representative of a CSAPR NO_x Annual unit shall also apply to the owners and operators of such unit.
- g. Effect on other authorities. No provision of the CSAPR NO_x Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_x Annual source or CSAPR NO_x Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(9VAC5-80-490 and 40 CFR 97.406)

135. **CSAPR SO₂ Group 1 Trading Program** - The following conditions must be adhered to for 501,502, 601, 602, CT1, CT2 and CT3), which are subject to the CSAPR SO₂ Group 1 Trading Program:
- a. Designated representative requirements. The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.
 - b. Emissions monitoring, reporting, and recordkeeping requirements.
 - i. The owners and operators, and the designated representative, of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
 - ii. The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of CSAPR SO₂ Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the CSAPR SO₂ Group 1 emissions limitation and assurance provisions under paragraph I.A.123.c below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.
 - c. SO₂ emissions requirements.
 - i. CSAPR SO₂ Group 1 emissions limitation.
 - (a) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO₂ Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO₂ emissions for such control period from all CSAPR SO₂ Group 1 units at the source.
 - (b) If total SO₂ emissions during a control period in a given year from the CSAPR SO₂ Group 1 units at a CSAPR SO₂ Group 1 source are in excess of

the CSAPR SO₂ Group 1 emissions limitation set forth in paragraph I.A.123.c(a) above, then:

- (i) The owners and operators of the source and each CSAPR SO₂ Group 1 unit at the source shall hold the CSAPR SO₂ Group 1 allowances required for deduction under 40 CFR 97.624(d); and
- (ii) The owners and operators of the source and each CSAPR SO₂ Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(2) CSAPR SO₂ Group 1 assurance provisions.

- (a) If total SO₂ emissions during a control period in a given year from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO₂ emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR SO₂ Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—
 - (i) The quotient of the amount by which the common designated representative's share of such SO₂ emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the for such control period, by which each common designated representative's share of such SO₂ emissions exceeds the respective common designated representative's assurance level; and
 - (ii) The amount by which total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state for such control period exceed the state assurance level.
- (b) The owners and operators shall hold the CSAPR SO₂ Group 1 allowances required under paragraph I.A.123.c(2)(a) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
- (c) Total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period in a given year exceed the

state assurance level if such total SO₂ emissions exceed the sum, for such control period, of the state SO₂ Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).

- (d) It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO₂ emissions from the CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.
- (e) To the extent the owners and operators fail to hold CSAPR SO₂ Group 1 allowances for a control period in a given year in accordance with paragraphs I.A.123.c(2)(a) through I.A.123.c(2)(c) above,
 - (i) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
 - (ii) Each CSAPR SO₂ Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs I.A.123.c(2)(a) through I.A.123.c(2)(c) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.

(3) Compliance periods.

- (a) A CSAPR SO₂ Group 1 unit shall be subject to the requirements under paragraph 135.ii.i above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.
- (b) A CSAPR SO₂ Group 1 unit shall be subject to the requirements under paragraph I.A.123.c(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

- (a) A CSAPR SO₂ Group 1 allowance held for compliance with the requirements under paragraph I.A.123.c(a) above for a control period in a given year must be a CSAPR SO₂ Group 1 allowance that was allocated for such control period or a control period in a prior year.
- (b) A CSAPR SO₂ Group 1 allowance held for compliance with the requirements under paragraphs I.A.123.c(b)(i) and I.A.123.c(2)(a) through I.A.123.c(2)(c) above for a control period in a given year must be a CSAPR SO₂ Group 1 allowance that was allocated for a control period in

a prior year or the control period in the given year or in the immediately following year.

- (5) Allowance Management System requirements. Each CSAPR SO₂ Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.
- (6) Limited authorization. A CSAPR SO₂ Group 1 allowance is a limited authorization to emit one ton of SO₂ during the control period in one year. Such authorization is limited in its use and duration as follows:
 - (a) Such authorization shall only be used in accordance with the CSAPR SO₂ Group 1 Trading Program; and
 - (b) Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (7) Property right. A CSAPR SO₂ Group 1 allowance does not constitute a property right.

d. Title V permit revision requirements.

- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR SO₂ Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.
- (2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B).

e. Additional recordkeeping and reporting requirements.

- (1) Unless otherwise provided, the owners and operators of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

- (a) The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each CSAPR SO₂ Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.
 - (b) All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.
 - (c) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR SO₂ Group 1 Trading Program.
- (2) The designated representative of a CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall make all submissions required under the CSAPR SO₂ Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70.
- f. Liability.
 - (1) Any provision of the CSAPR SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 source or the designated representative of a CSAPR SO₂ Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO₂ Group 1 units at the source.
 - (2) Any provision of the CSAPR SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 unit or the designated representative of a CSAPR SO₂ Group 1 unit shall also apply to the owners and operators of such unit.
- g. Effect on other authorities. - No provision of the CSAPR SO₂ Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR SO₂ Group 1 source or CSAPR SO₂ Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(9VAC5-80-490 and 40 CFR 97.606)

136. **CSAPR NO_x Ozone Season Group 2 Trading Program** - The following conditions must be adhered to for 501, 502, 601, 602, CT1, CT2 and CT3, which are subject to the CSAPR NO_x Group 2 Trading Program.

- a. Designated representative requirements. The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.813 through 97.818.
- b. Emissions monitoring, reporting, and recordkeeping requirements.
 - i. The owners and operators, and the designated representative, of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.830 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.831 (initial monitoring system certification and recertification procedures), 97.832 (monitoring system out-of-control periods), 97.833 (notifications concerning monitoring), 97.834 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.835 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
 - ii. The emissions data determined in accordance with 40 CFR 97.830 through 97.835 shall be used to calculate allocations of CSAPR NO_x Ozone Season Group 2 allowances under 40 CFR 97.811(a)(2) and (b) and 97.812 and to determine compliance with the CSAPR NO_x Ozone Season Group 2 emissions limitation and assurance provisions under paragraph 136.c below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.830 through 97.835 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.
- c. NO_x emissions requirements.
 - i. CSAPR NO_x Ozone Season Group 2 emissions limitation.
 - (a) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO_x Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.824(a) in an amount not less than the tons of total NO_x emissions for such control period from all CSAPR NO_x Ozone Season Group 2 units at the source.
 - (b) If total NO_x emissions during a control period in a given year from the CSAPR NO_x Ozone Season Group 2 units at a CSAPR NO_x Ozone Season Group 2 source are in excess of the CSAPR NO_x Ozone Season Group 2 emissions limitation set forth in paragraph 136.c.i above, then:
 - (i) The owners and operators of the source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall hold the CSAPR NO_x

Ozone Season Group 2 allowances required for deduction under 40 CFR 97.824(d); and

- ii. The owners and operators of the source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart EEEEE and the Clean Air Act.
- ii CSAPR NO_x Ozone Season Group 2 assurance provisions.
- (a) If total NO_x emissions during a control period in a given year from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_x emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_x Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.825(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.825(b), of multiplying—
 - (i) The quotient of the amount by which the common designated representative's share of such NO_x emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO_x emissions exceeds the respective common designated representative's assurance level; and
 - (ii) The amount by which total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state for such control period exceed the state assurance level.
 - (b) The owners and operators shall hold the CSAPR NO_x Ozone Season Group 2 allowances required under paragraph 0 above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
 - (c) Total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a

control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the state CSAPR NO_x Ozone Season Group 2 trading budget under 40 CFR 97.810(a) and the state's variability limit under 40 CFR 97.810(b).

- (d) It shall not be a violation of 40 CFR part 97, subpart EEEEE or of the Clean Air Act if total NO_x emissions from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO_x emissions from the CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x Ozone Season Group 2 sources in the state during a control period exceeds the common designated representative's assurance level.
- (e) To the extent the owners and operators fail to hold CSAPR NO_x Ozone Season Group 2 allowances for a control period in a given year in accordance with paragraphs 0 through I.A.123.g(c) above,
 - (i) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
 - ii. Each CSAPR NO_x Ozone Season Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs 0 through I.A.123.g(c) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart EEEEE and the Clean Air Act.
 - iii. Compliance periods.
 - (a) CSAPR NO_x Ozone Season Group 2 unit shall be subject to the requirements under paragraph 136.c.i above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.
 - (b) CSAPR NO_x Ozone Season Group 2 unit shall be subject to the requirements under paragraph 0 above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.
 - iv. Vintage of allowances held for compliance.
 - (a) A CSAPR NO_x Ozone Season Group 2 allowance held for compliance with the requirements under paragraph 136.c.i above for a control period in a given year must be a CSAPR NO_x Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.
 - (b) A CSAPR NO_x Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs I.A.123.g(i) and 0 through I.A.123.g(c) above for a control period in a given year must be a CSAPR NO_x Ozone Season Group 2 allowance that was allocated for a control period in

- a prior year or the control period in the given year or in the immediately following year.
- v. Allowance Management System requirements. Each CSAPR NO_x Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart EEEEE.
 - vi. Limited authorization. A CSAPR NO_x Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO_x during the control period in one year. Such authorization is limited in its use and duration as follows:
 - (a) Such authorization shall only be used in accordance with the CSAPR NO_x Ozone Season Group 2 Trading Program; and
 - (b) Notwithstanding any other provision of 40 CFR part 97, subpart EEEEE, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
 - vii. Property right. A CSAPR NO_x Ozone Season Group 2 allowance does not constitute a property right.
- d. Title V permit revision requirements.
- i. No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_x Ozone Season Group 2 allowances in accordance with 40 CFR part 97, subpart EEEEE.
 - ii. This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.830 through 97.835, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subpart H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), or an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the monitoring descriptions in the **Error! Reference source not found.** table above, for 501, 502, 601, 602, CT1, CT2 and CT3 may be added to or changed in this Title V permit using minor permit modification procedures in accordance with 40 CFR 97.806(d)(2) and 70.7(e)(2)(i)(B).
- e. Additional recordkeeping and reporting requirements.
- i. Unless otherwise provided, the owners and operators of each CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
 - (a) The certificate of representation under 40 CFR 97.816 for the designated representative for the source and each CSAPR NO_x Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the

- submission of a new certificate of representation under 40 CFR 97.816 changing the designated representative.
- (b) All emissions monitoring information, in accordance with 40 CFR part 97, subpart EEEEE.
 - (c) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_x Ozone Season Group 2 Trading Program.
- ii. The designated representative of a CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO_x Ozone Season Group 2 Trading Program, except as provided in 40 CFR 97.818. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR parts 70.
- f. Liability.
 - i. Any provision of the CSAPR NO_x Ozone Season Group 2 Trading Program that applies to a CSAPR NO_x Ozone Season Group 2 source or the designated representative of a CSAPR NO_x Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO_x Ozone Season Group 2 units at the source.
 - ii. Any provision of the CSAPR NO_x Ozone Season Group 2 Trading Program that applies to a CSAPR NO_x Ozone Season Group 2 unit or the designated representative of a CSAPR NO_x Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.
 - g. Effect on other authorities. - No provision of the CSAPR NO_x Ozone Season Group 2 Trading Program or exemption under 40 CFR 97.805 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_x Ozone Season Group 2 source or CSAPR NO_x Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(9VAC5-80-490 and 40 CFR 97.806)

Notwithstanding the provisions of paragraph 136.a through 136.f above, paragraphs 136.a through 136.f shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the state.

(40 CFR Part 97, Subpart AAAAA – CCCCC and 9 VAC 5-80-110)

Note: As of January 29, 2018, **Virginia** has seven **federally recognized tribes**: the Pamunkey Indian Tribe, Chickahominy, Eastern Chickahominy, Upper Mattaponi, Rappahannock, Nansemond and Monacan. The latter six gained recognition through passage of federal legislation in the 21st century.

State-Only Enforceable Requirements

137. **State-Only Enforceable Requirements** - The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed

permits by EPA and draft permits by affected states.
 Odor: None State Toxics Rule
 (9 VAC 5-80-110 N and 9 VAC 5-80-300)

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

From the February 2, 2021 NSR Permit Condition Numbers: 22 and 23.

138. **Toxic Pollutant Emission Limits** - Toxics pollutant emissions from each combustion turbine/duct burner exhaust shall not exceed the limitations specified below:

Beryllium	0.004 lbs/hr/stack	0.09 lbs/day/stack
Formaldehyde	0.609 lbs/hr/stack	14.60 lbs/day/stack
Nickel	0.255 lbs/hr/stack	6.13 lbs/day/stack

(9VAC5-80-290 and Condition 22 of 02/02/2021 Permit)

139. **SOE Emissions Limits - Visible Emissions Limit** - Visible emissions from each exhaust point at the combined cycle facility shall not exceed ten (10) percent opacity except during periods of start-up, shutdown and malfunction.
 (9VAC5-80-290 and Condition 23 of 02/02/2021 Permit)

140. **SOE Emission Limits: Toxic Pollutant Emission Limits** - Toxics pollutant emissions from the simple cycle combustion turbine (ref. no. 82, 83, 91, 92, 101 and 102) exhaust while firing natural gas shall not exceed the limitations specified below (except during start-up, shutdown and malfunction conditions):

Pollutant	CAS#			
Acrolein	107-02-8	0.0128	lbs/hr/stack	- TPY/stack
Formaldehyde	50-00-0	0.4040	lbs/hr/stack	0.5 TPY/stack

Toxics pollutant emissions from the simple cycle combustion turbine (ref. no. 81) while firing **No. 2 distillate fuel oil** shall not exceed the limits specified below (except during start-up, shutdown and malfunction conditions):

Pollutant	CAS#			
Beryllium		0.00064	lbs/hr/stack	- TPY/stack
Formaldehyde	50-00-0	0.13000	lbs/hr/stack	0.5 TPY/stack
Nickel		0.00120	lbs/hr/stack	- TPY/stack

(9VAC5-80-290 and Condition 50 of 10/19/2020 Permit)

141. **SOE Records** - The permittee shall maintain records of all emission data, fuel throughputs (heat input consumption) and operating parameters required to demonstrate compliance

with condition 140 of this permit. The content and format of such records shall be arranged with the Piedmont Regional Office (PRO) of the DEQ.
(9VAC5-80-290 and Condition 51 of 10/19/2020 Permit)